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farm, ranch + recreation

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Boyd, James S.

Buildings for small acreages: farm, ranch & recreation

BUILDINGS

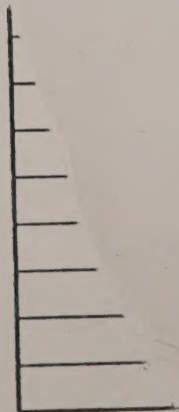
4

FOR

SMALL ACREAGES

FARM, RANCH & RECREATION

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BUILDINGS FOR SMALL ACREAGES

FARM, RANCH & RECREATION

JAMES S. BOYD, Ph.D.

AGRICULTURAL ENGINEERING DEPARTMENT
MICHIGAN STATE UNIVERSITY

Order from The Interstate Printers & Publishers, Inc.

Danville, Illinois 61832

BUILDINGS FOR SMALL ACREAGES

Farm, Ranch & Recreation

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Library of Congress Catalog Card No. 77-080716

Reorder No. 1966



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INTRODUCTION

In recent years, more and more people have been moving away from our urban areas and out to the country. The rural land around our cities is providing a new way of life for those who have escaped the hectic pace of the city—to live closer to nature, to be able to raise animals, to grow a garden that can give their family fresh food, or for many other reasons.

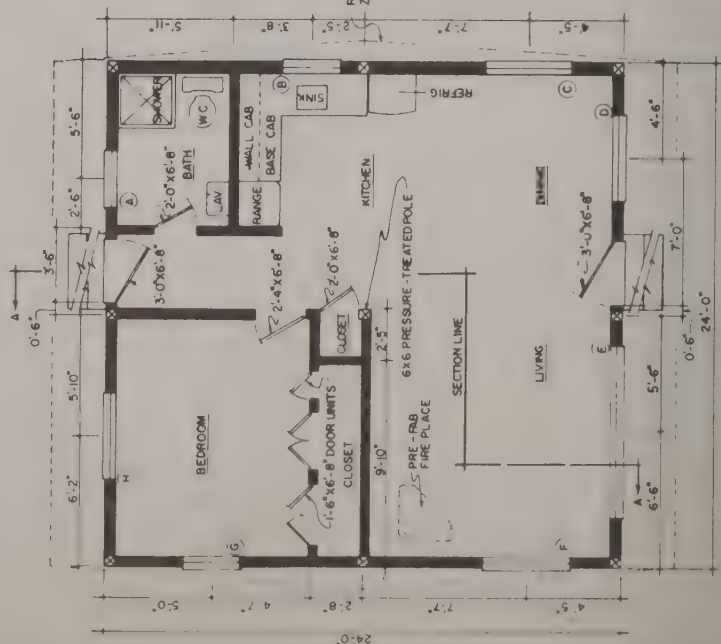
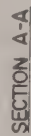
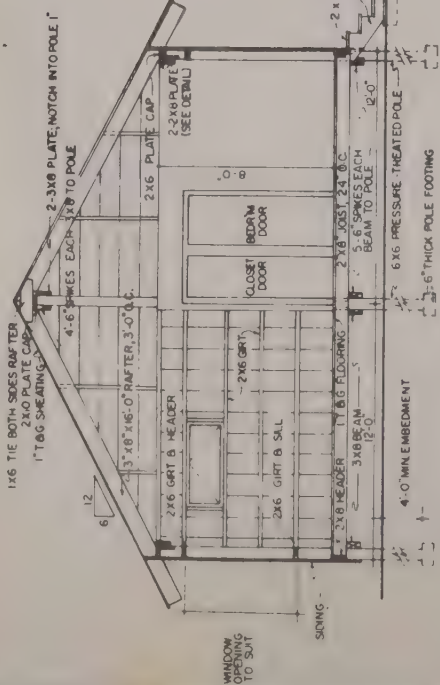
This book consists of a variety of plans I have gathered for the many types of buildings that a family group living on a small acreage might need—either to get started or to increase the utility and comfort of an already existing lifestyle. *Buildings for Small Acreages* includes plans from buildings for pets and livestock and structures for water supply and sanitation, to plans for setting up a comfortable recreation area for you and your family to enjoy.

To locate the particular plans you may be seeking, or to easily browse through others, I have set apart each group of plans with main subject dividers. These sections are listed in the Table of Contents. An Index is also provided so that you can easily locate specific plans.

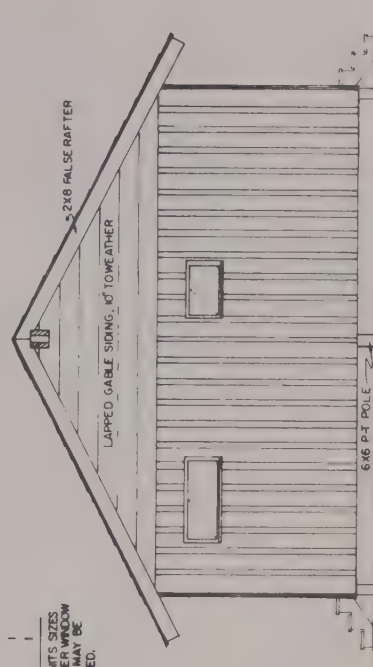
And for those family groups who are planning a larger operation, requiring larger types of farm buildings, I have included three lists of available designs, along with their order numbers. My lists were obtained from (1) the U.S. Department of Agriculture, (2) the American Plywood Association, and (3) Michigan State University. Also included is the address of each state's Extension Plan Service Office. This group of lists comprises the Appendices for this volume. These sources provide a complete array of plans for establishing larger farm and ranch operations.

I hope that between the assortment of plans within *Buildings for Small Acreages* and the sources I have supplied, you and your family will find the plans for whatever kinds of structures you need, and that their addition will be a welcome one to "the country life."

James S. Boyd



FRONT ELEVATION



SIDE ELEVATION

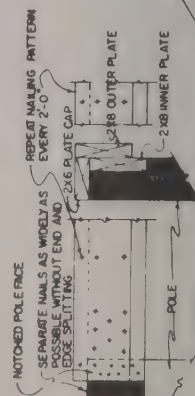


PLATE POLE DETAIL

PLATE NAILING DETAIL

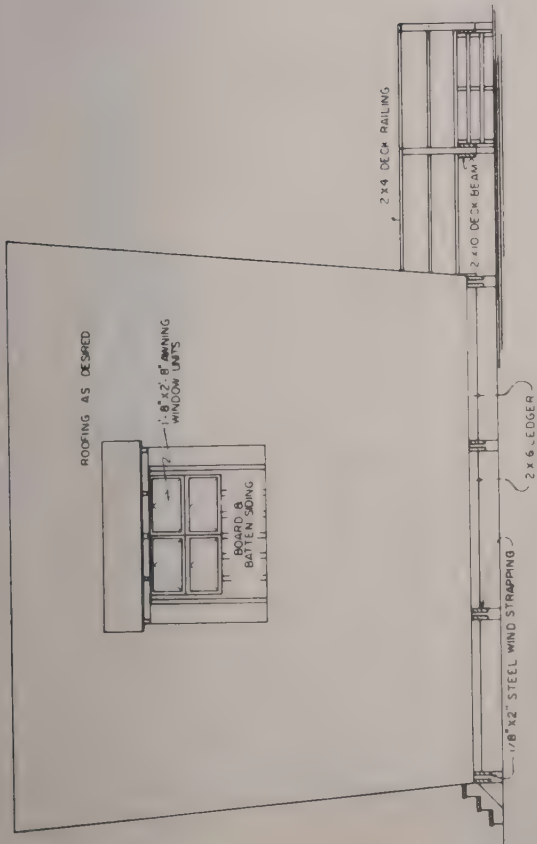
BASED ON UNIV. OF MASS. PLAN MC-4613

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL ENGINEERING DEPARTMENT
MICHIGAN STATE UNIVERSITY, E. LANSING
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

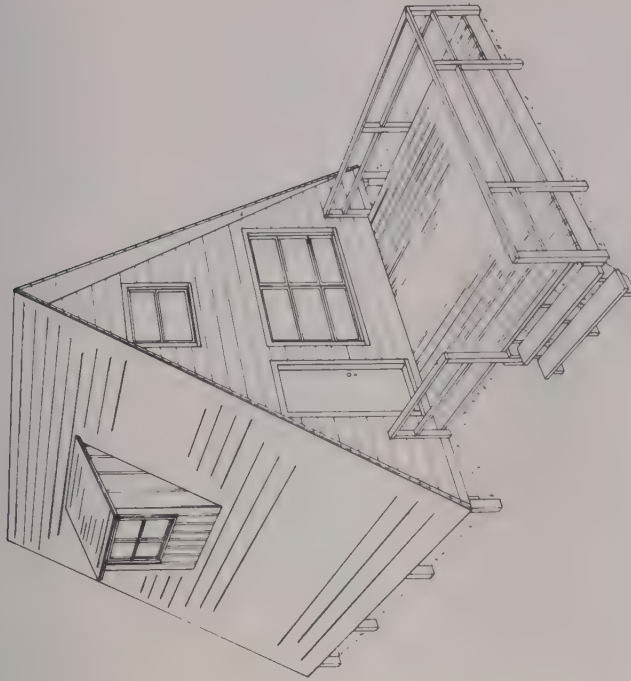
24'-0" POLE-FRAME CABIN

MASS '66	EX. 6002	SHEET 1 OF 1
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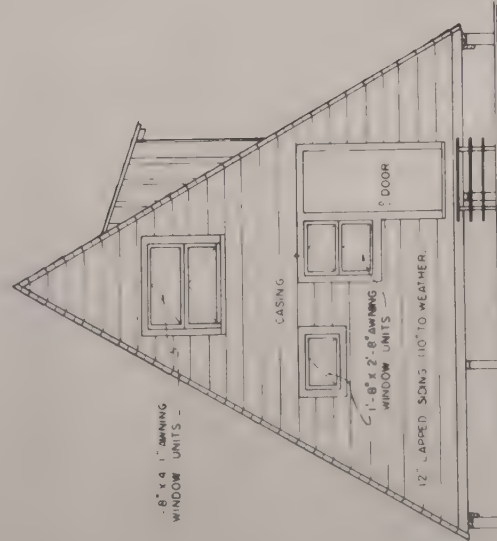
PLAN FILE NO. 712



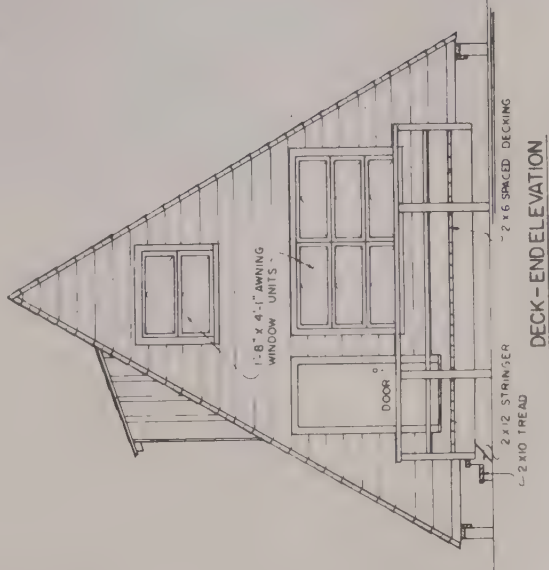
SIDE ELEVATION



PERSPECTIVE

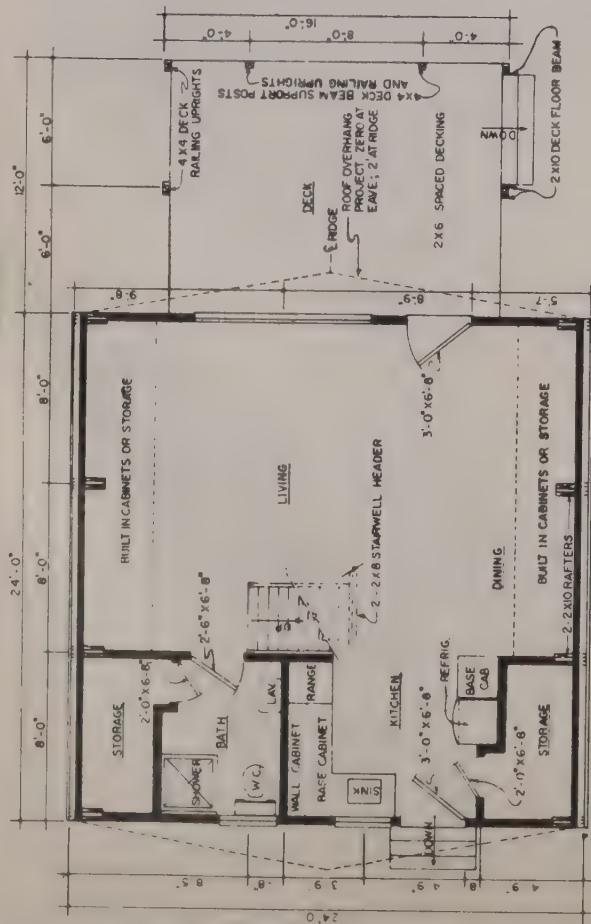


REAR ELEVATION

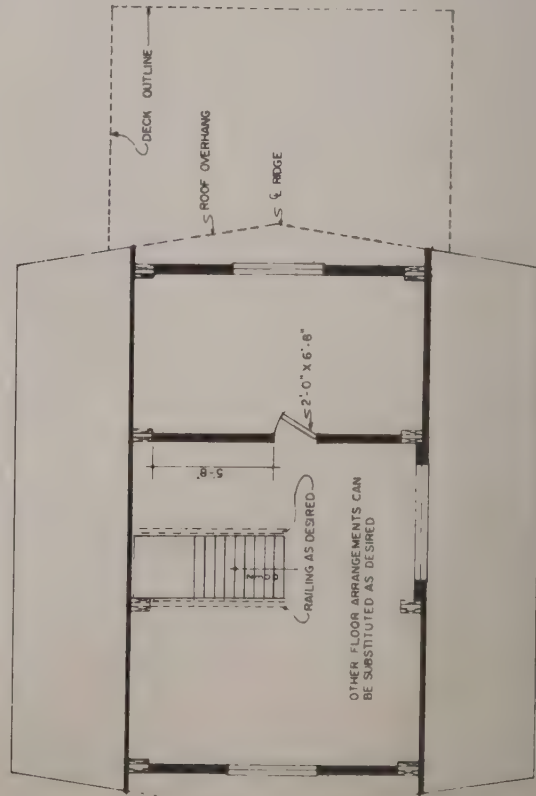


DECK-ELEVATION

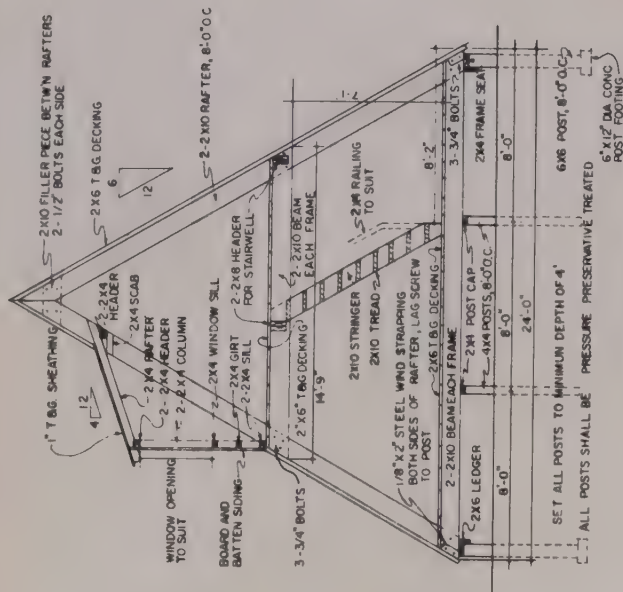
BASED ON UNIV. OF MASS. PLAN MC-4812 COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AGRICULTURAL ENGINEERING DEPARTMENT MICHIGAN STATE UNIVERSITY, E. LANSING UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING			
24'-0" A-FRAME CABIN			
MASS. '66	EX 6003	SHEET 1 OF 2	
FILE PLAN CODE NO. 712			



FLOOR PLAN



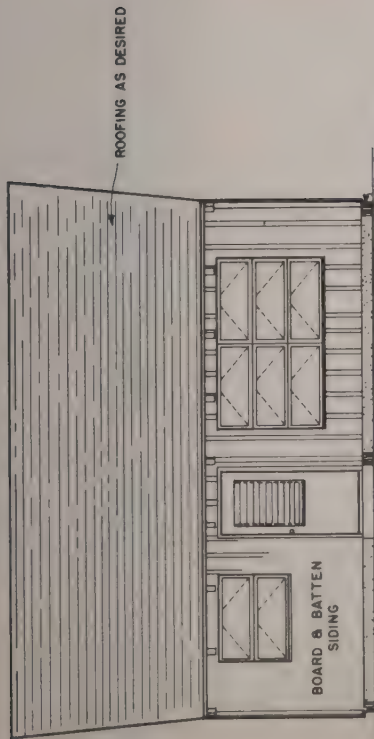
2nd FLOOR PLAN



CROSS SECTION

NOTES:

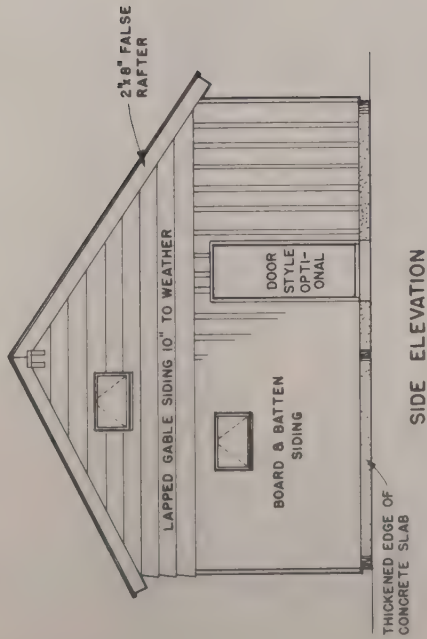
- DESIGN FLOOR LOAD: 30 PSF
- DESIGN FLOOR STRESS IN BENDING: 1200 PSI
- FLOOR MEMBER DEFLECTION LIMIT: $\frac{1}{360}$
- FLOOR JOINTS SHALL BE STAGGERED AS MUCH AS POSSIBLE
- RAFTERS AND FLOOR BEAMS ARE INTENDED TO BE 24" LONG IN ORDER TO FACILITATE THE INSTALLATION OF JOINTS IN THE GROUND. IF SPLICES ARE NECESSARY, LOCATE RAFTER JOINTS ABOVE 2ND FLOOR LEVEL AND FLOOR-BEAM JOINTS (STAGGER JOINTS) ABOVE 1ST FLOOR LEVEL. INTERIOR FINISH IS LEFT TO BUILDER'S DISCRETION.
- ALL STRUCTURAL FRAMING SHALL BE ROUGH LUMBER
- LAPPED ROUGH FRAMING (NOMINAL SIZE) SUGGESTED FOR END-WALL SINGING OTHER METHODS MAY BE SUBSTITUTED IF DESIRED
- ALL ANVING WINDOWS UNIT SIZE ARE APPROXIMATE. OTHER WINDOW SIZES AND OR STYLES MAY BE SUBSTITUTED AS DESIRED.
- INTERIOR FINISH IS LEFT TO BUILDER'S DISCRETION.



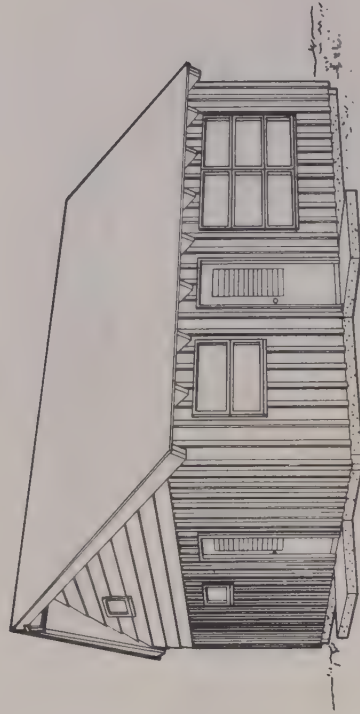
FRONT ELEVATION



REAR ELEVATION



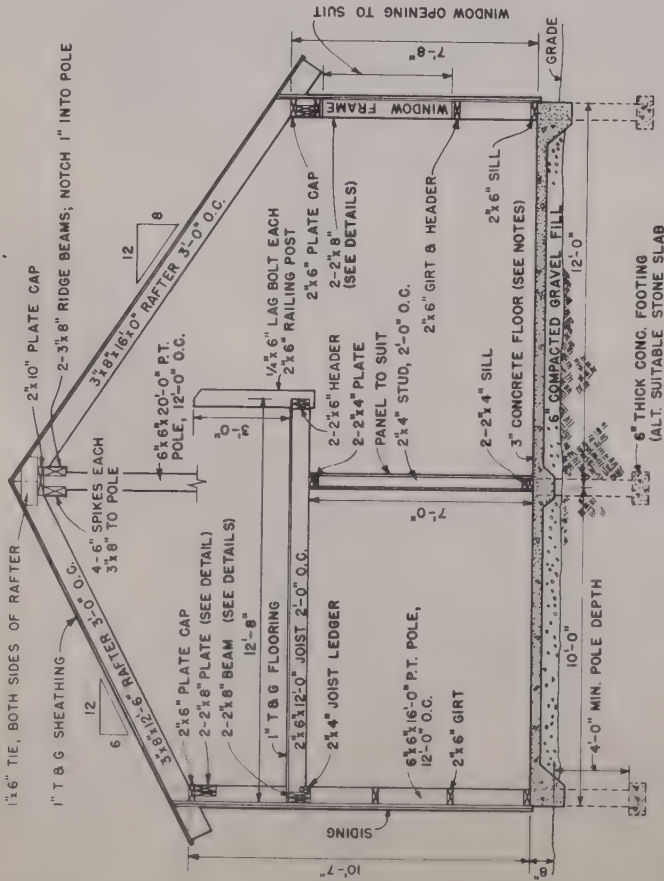
SIDE ELEVATION



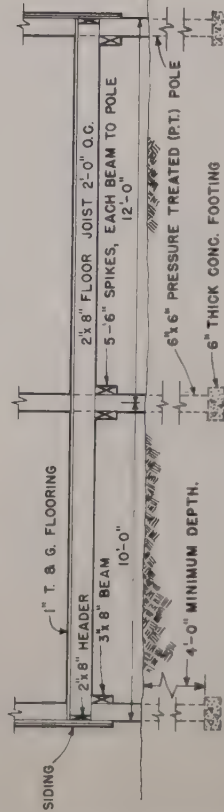
PERSPECTIVE

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AGRICULTURAL ENGINEERING DEPARTMENT MICHIGAN STATE UNIVERSITY, E. LANSING AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
MASS. '67	EX 6013	SHEET 1 OF 3
DORMITORY LOFT CABIN		
PLAN FILE NO: 712		

MASS. PLAN MC4622



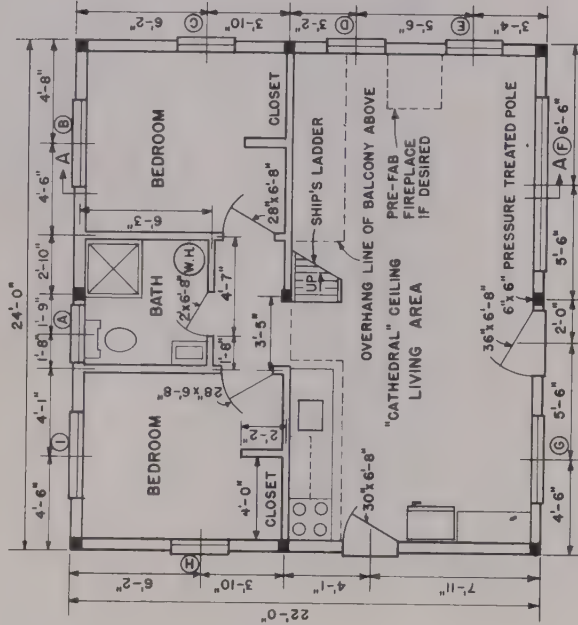
SECTION "A-A"



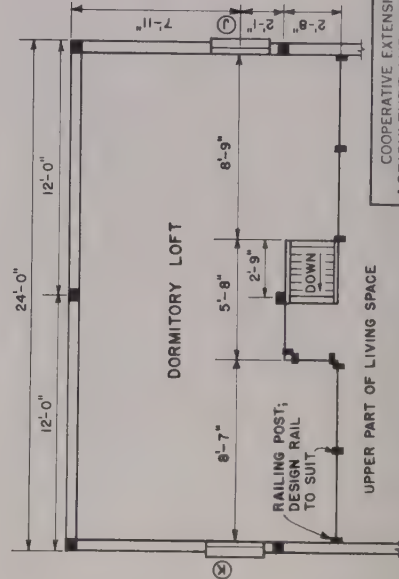
ALTERNATE FLOOR SECTION

AWNING WINDOW SCHEDULE			
WINDOW UNIT	SIZE	NO. REQ.	WINDOW UNIT SIZE
A	1-8x2-8	1	1-8x4-1
B	1-8x4-1	1	1-8x2-8
C	1-8x2-8	1	1-8x4-1
D	1-8x4-1	1	1-8x2-8
E	1-8x2-8	1	1-8x4-1
F	1-8x4-1	1	1-8x2-8

ALL AWNING WINDOW UNIT SIZES ARE APPROXIMATE.
OTHER WINDOW STYLES OR SIZES MAY BE SUBSTITUTED.

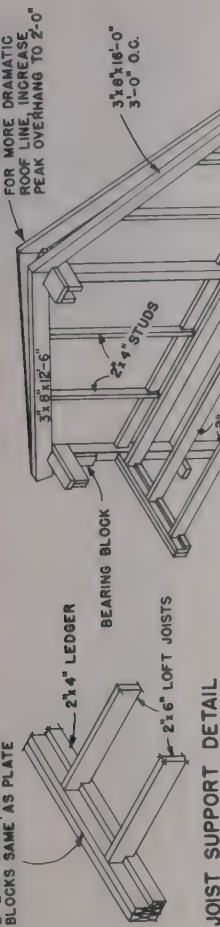


PLAN

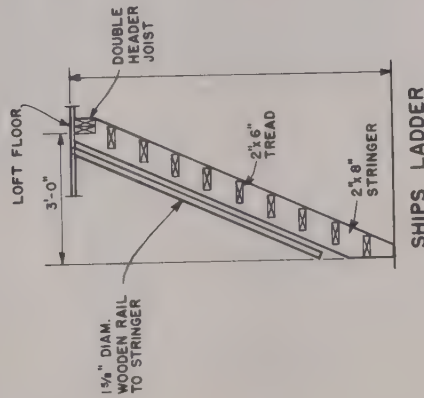


LOFT PLAN

UPPER PART OF LIVING SPACE



END-WALL FRAMING



2-2 x 8" BEAMS WITH 2 x 4" LEDGER (SEE DETAIL)

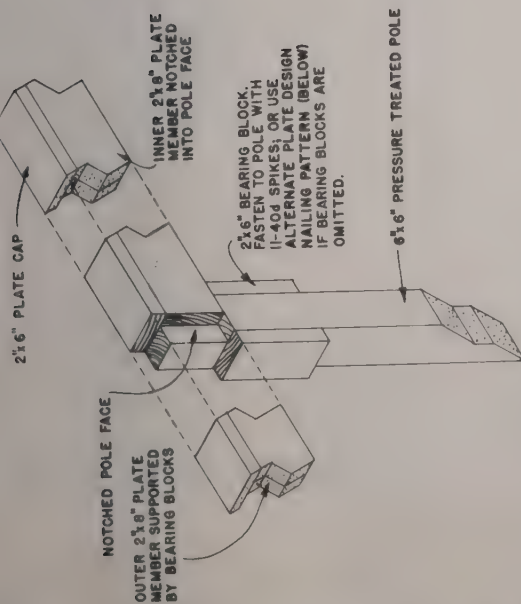
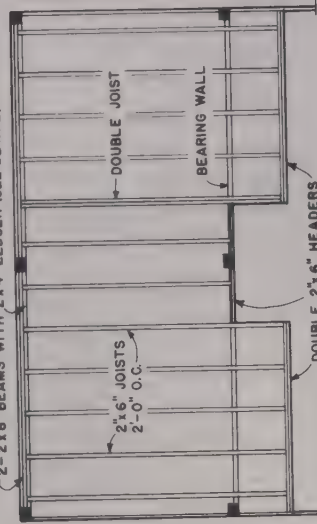
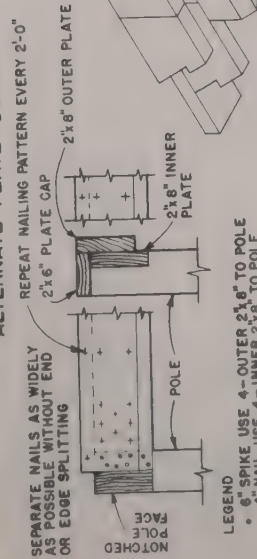


PLATE POLE DETAIL

ALTERNATE PLATE DESIGN



LEGEND

- 6" SPIKE USE 4"-OUTER 2 x 6" TO POLE
- 4" NAIL USE 4"-INNER 2 x 6" TO POLE
- 4" NAIL USE NUMBERS AS SHOWN

PLATE POLE DETAIL

PLATE NAILING DETAIL

CONSTRUCTION NOTES

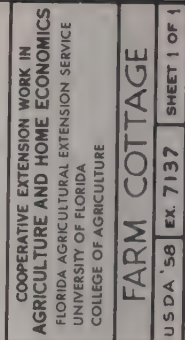
- THIS DESIGN IS BASED ON ROUGH-SAWN EASTERN HEMLOCK.
- DESIGN ROOF LOAD - 40 LBS. PER SQ. FT.
- DESIGN FLOOR LOAD (WOOD FRAME) 35 LBS. PER SQ. FT.
- CONCRETE SLAB FLOOR HAS THICKENED EDGE 12" DEEP, 8" WIDE ALONG BOTTOM EDGE; CONCRETE MIX: 3/4" MAXIMUM AGGREGATE SIZE, 6 1/2 SACKS OF CEMENT PER CUBIC YARD, AND 6 GAL. WATER CEMENT RATIO.
- FOR CONCRETE SLABS, ON OTHER THAN WELL DRAINED SOIL, WELL COMPACTED, USE 6 x 6" - NO. 10 WIRE REINFORCING MESH.
- SPECIFIED POLE LENGTHS ARE FOR CONCRETE SLAB DESIGN ONLY. LONGER POLES ARE REQUIRED FOR WOOD FRAME FLOOR DESIGN; LENGTH OF POLE IS DEPENDENT ON DEPTH OF BUILDING SITE AND SETTING POLE IN GROUND TO FRAME CONSTRUCTION ON MASONRY FOUNDATION.
- CONVENTIONAL BUILDING FRAME CONSTRUCTION ON MASONRY FOUNDATION MAY BE SUBSTITUTED FOR POLE FRAME IF DESIRED.
- BEFORE EXTERIOR FINISH IS LEFT TO BUILDER'S DISCRETION, NO ATTEMPT WAS MADE TO PROVIDE MODULAR INTERIOR DIMENSIONS; SLIGHT CHANGES IN GIRT SPACING MAY BE DESIRABLE IF INTERIOR FINISHING IS DESIRED.

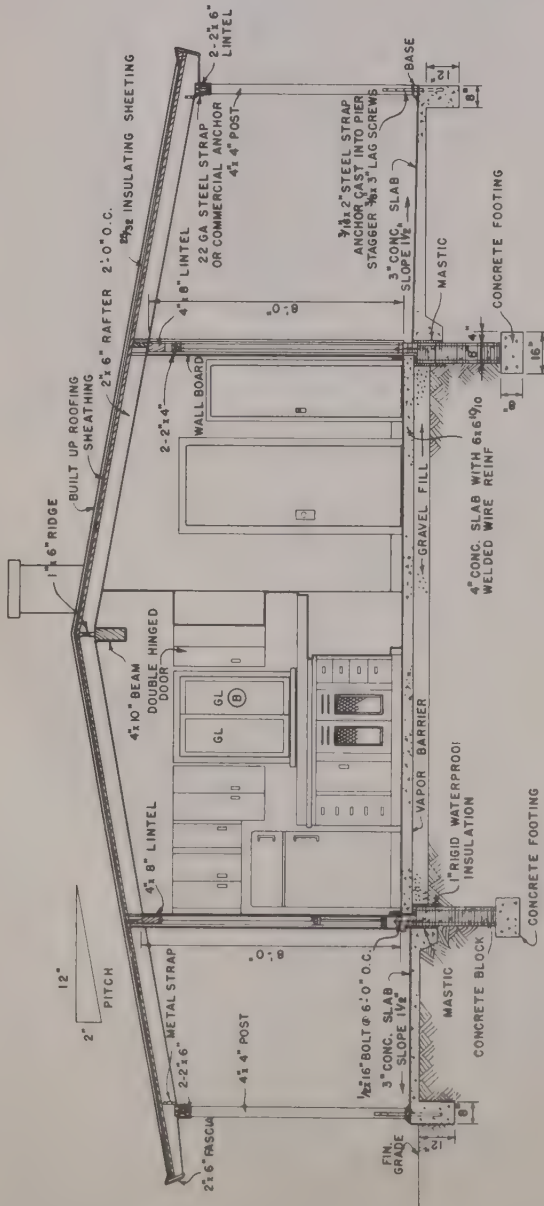
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AGRICULTURAL ENGINEERING DEPARTMENT
MICHIGAN STATE UNIVERSITY, E. LANSING
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

DORMITORY LOFT CABIN

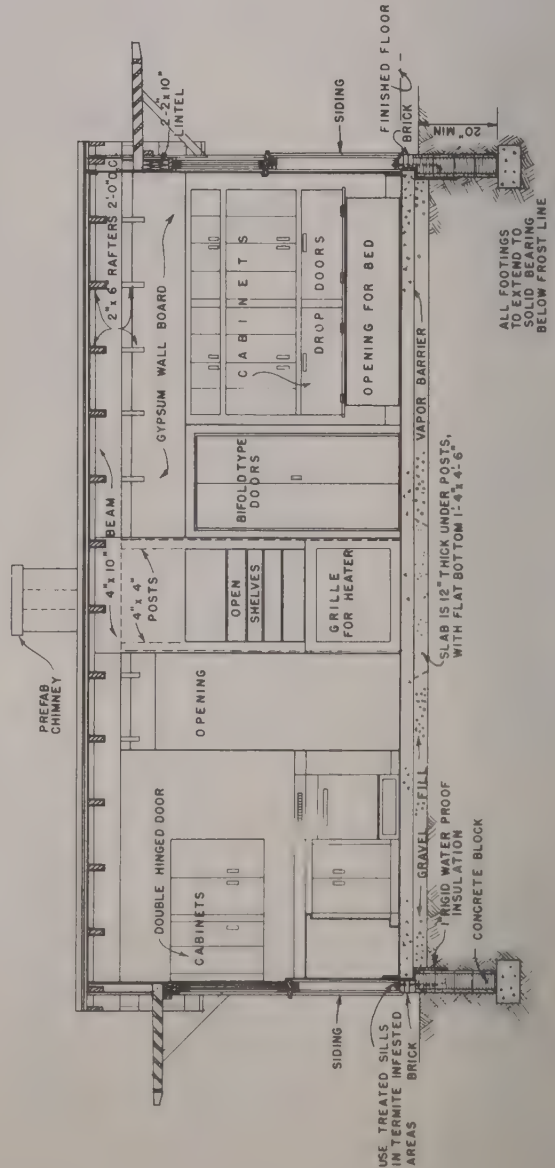
MASS. '67 EX. 6013 SHEET 3 OF 3

PLAN FILE NO: 712

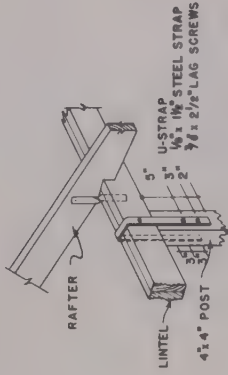




SECTION A-A

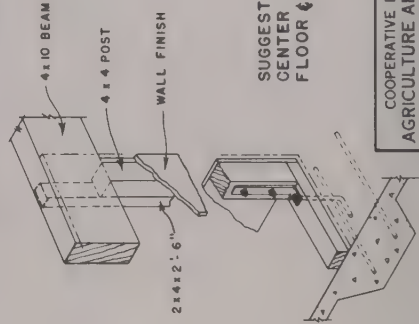


SECTION B-B



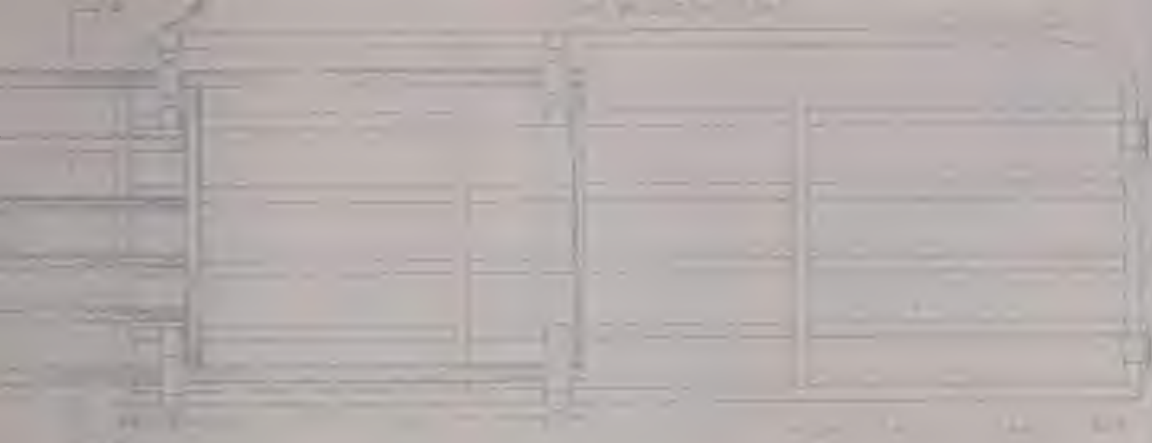
CONNECTION OF RAFTERS
AND POSTS TO LINTELS

WINDOW SCHEDULE			
MARK	SIZE	DESCRIPTION	NO REQ.
A	3'-8" x 2'-8"	SLIDING SASH	3
B	3'-0" x 2'-6"	"	1
C	2'-8" x 2'-8"	"	1
D	2'-0" x 2'-8"	"	1
E	3'-0" x 2'-0"	FIXED SASH	3
F	3'-0" x 4'-0"	FIXED SASH	2



SUGGESTED CONNECTION OF
CENTER 4x4 POSTS AT
FLOOR & ROOF BEAM

FENCES AND GATES



PICTORIAL VIEW

6" ϕ HEAVY DUTY
STEEL PIPE POST



POST CONNECTION

GREASE
FITTING

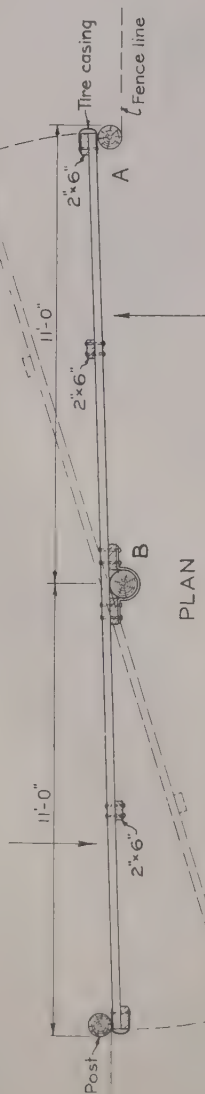
$\frac{1}{2}$ " BOLT

6 PIPE

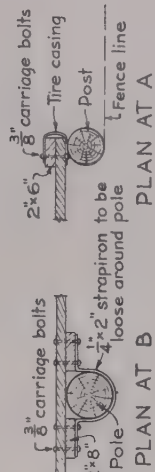


$\frac{3}{8}$ " x 8" carriage bolt
Chain

PLAN AT D

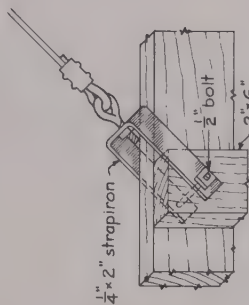


PLAN



PLAN AT B

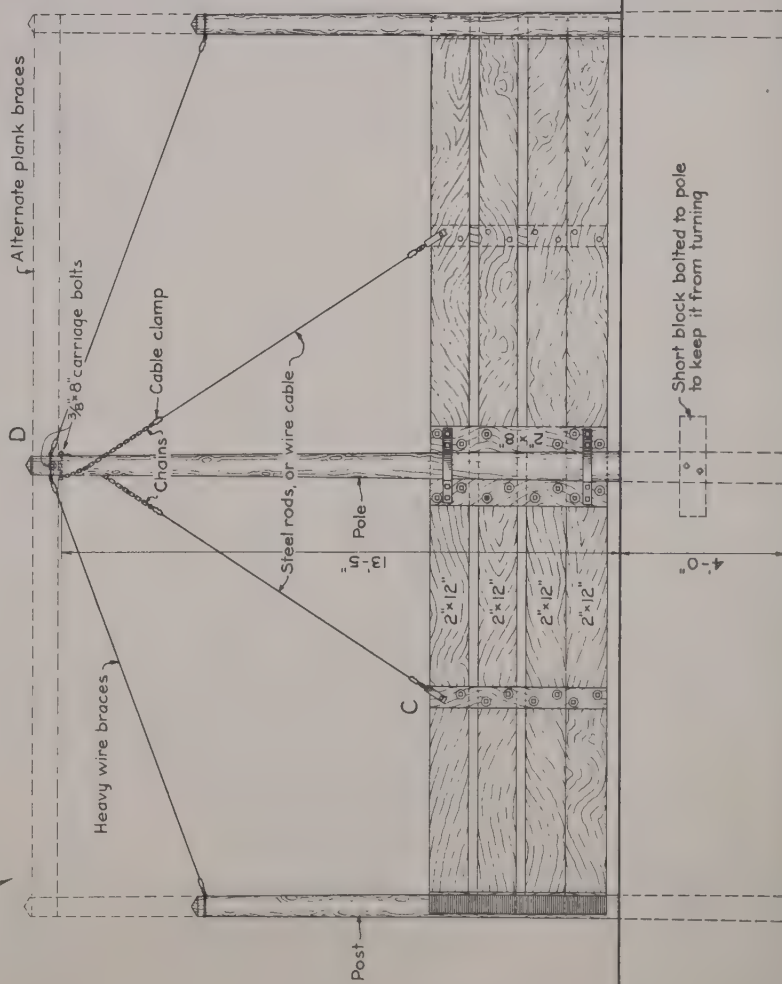
PLAN AT A



DETAIL AT C

BILL OF MATERIALS

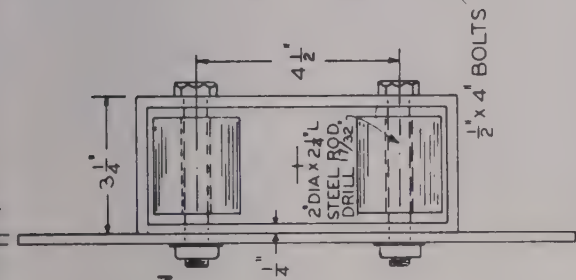
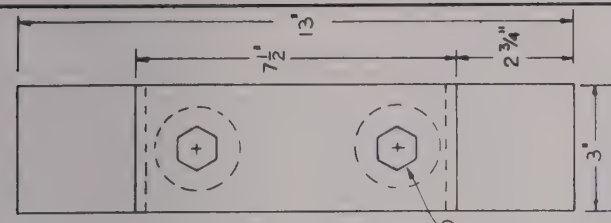
- 1-8" x 18'-0" pole
- 2-6" x 15'-0" posts
- 4-2" x 12" x 22'-0" planks
- 1-2" x 8" x 10'-0" cleats
- 2-2" x 6" x 10'-0"
- 2-1/4" x 2" x 2'-6" bent strapirons
- 2-1/4" x 2" x 2'-3" clevises
- 2-3/8" x 8" carriage bolts
- 58-3/8" x 4"
- 2-3/8" x 2" eye bolts
- 58-washers to fit carriage bolts
- 5-lined feet of link chain
- 50- " " 1/2" wire cable
- 8-cable clamps
- Old tire casing



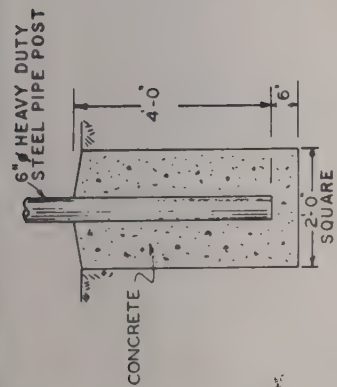
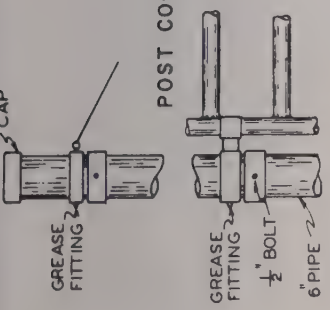
ELEVATION

Short block bolted to pole
to keep it from turning

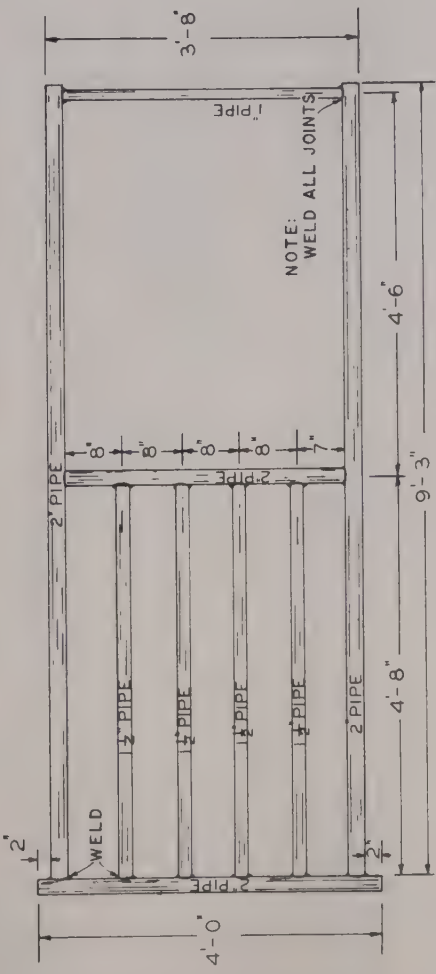
U.S. DEPARTMENT OF AGRICULTURE	
BUREAU OF AGRICULTURAL CHEMISTRY AND ENGINEERING	
FARM STRUCTURES RESEARCH DIVISION	
AUTO BUMPER GATE	
Scale: As shown	CHECKED
Drawn By: R.C.	SHEET 1 OF 1
Traced By: R.C.	SERIAL NO. 5614
APPROVED	



DETAIL B

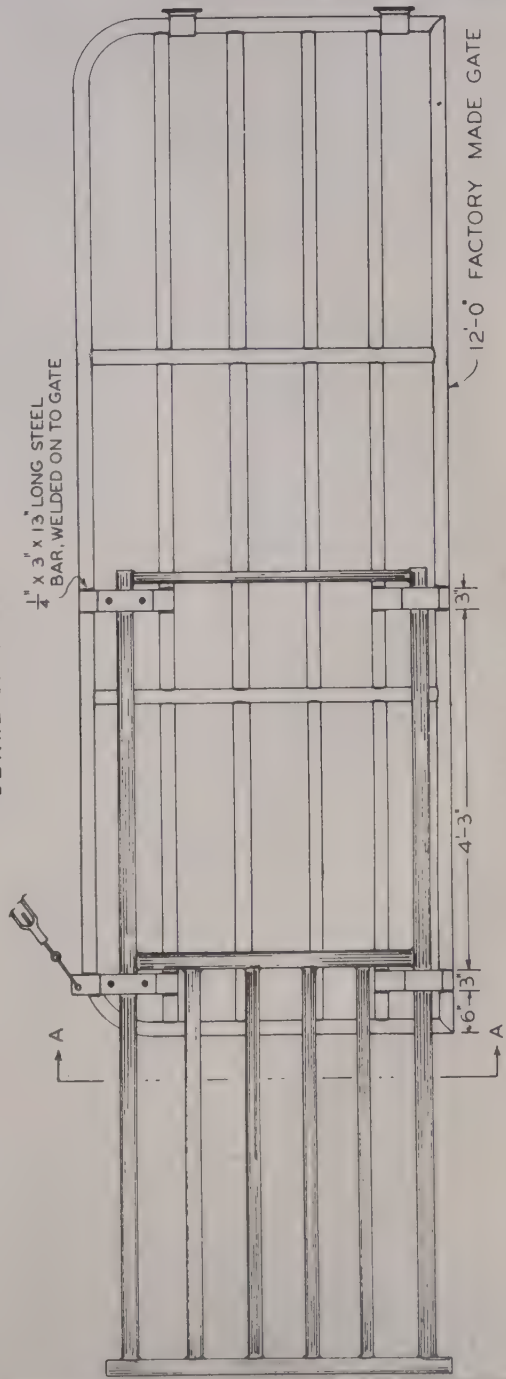


PICTORIAL VIEW



DETAIL OF GATE

1" x 3" x 13' LONG STEEL BAR, WELDED ON TO GATE



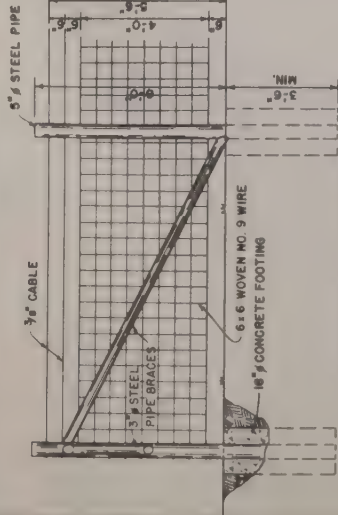
GATE ASSEMBLY

SECTION A - A

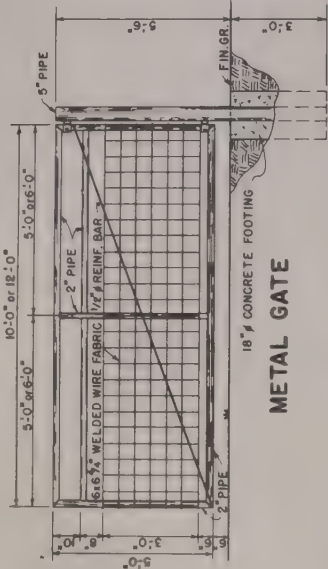
BASED ON: OREGON STATE UNIV.
PLAN NO. BP 109

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BIOLOGICAL & AGRICULTURAL ENGINEERING DEPT
Ext. Bldg. & Agr. Engng. Raleigh, N. C.
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

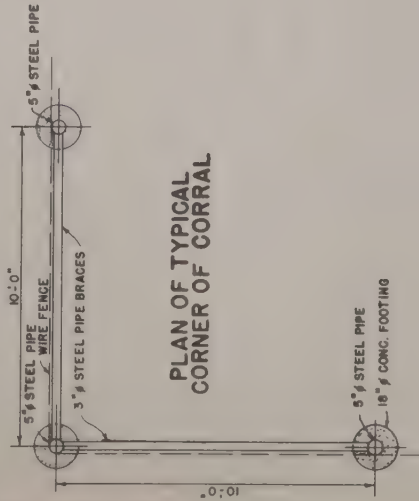
GATE		TELESCOPING TYPE	
ORE	'72	6151	SHEET 1 OF 1



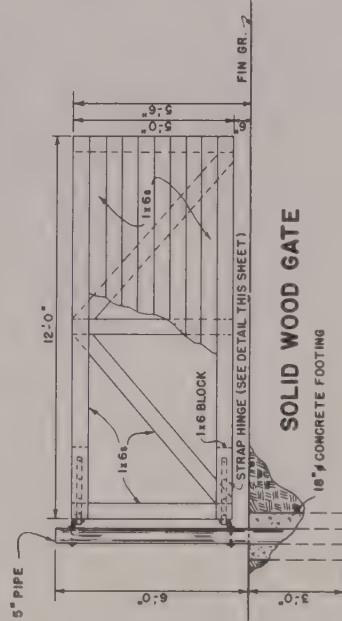
ELEVATION OF FENCING
TYPICAL CORNER



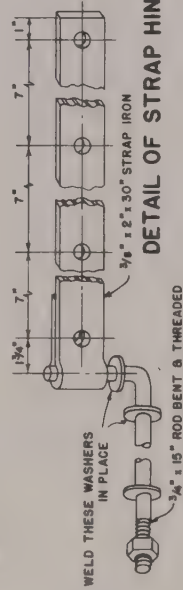
METAL GATE



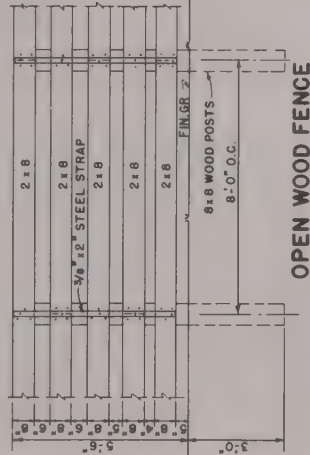
PLAN OF TYPICAL
CORNER OF CORRAL



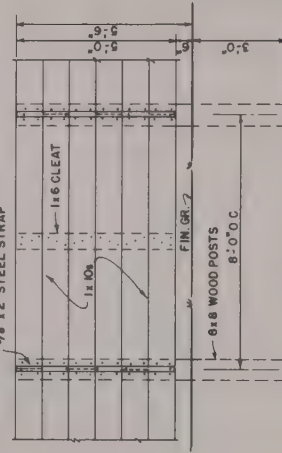
SOLID WOOD GATE



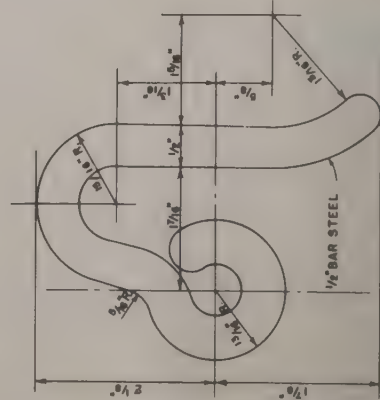
DETAIL OF STRAP HINGE



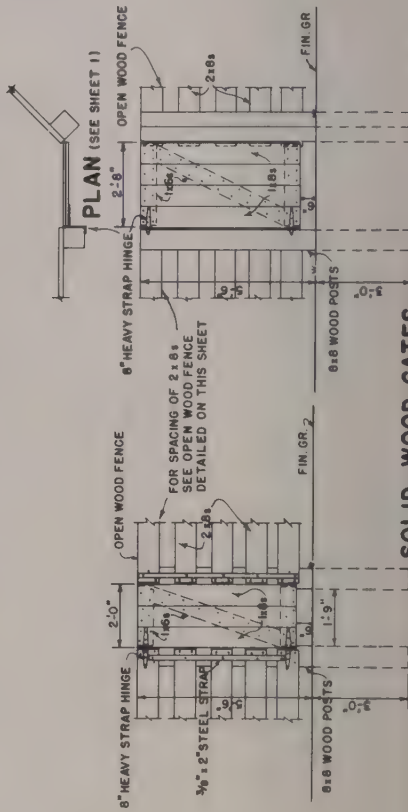
OPEN WOOD FENCE



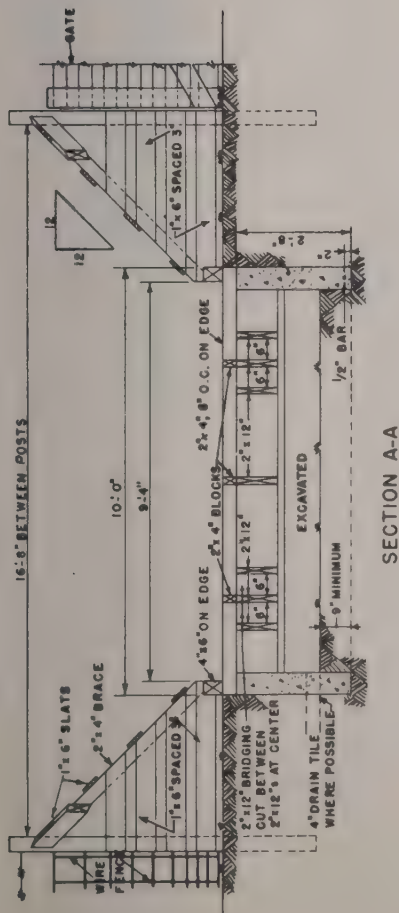
SOLID WOOD FENCE



GATE HOOK

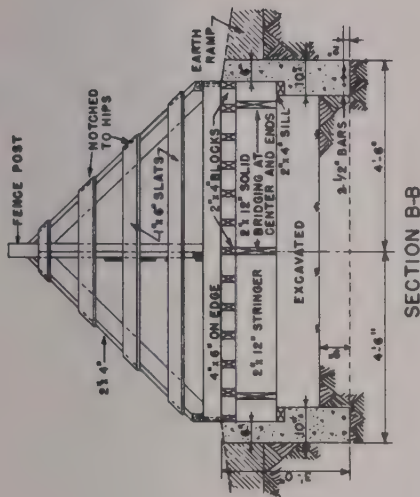


SOLID WOOD GATES



SECTION A-A

SECTION A-A, SHOWS GUARD FLOOR BUILT LEVEL WITH GRADE
SECTION B-B, SHOWS GUARD FLOOR RAISED ABOVE GRADE



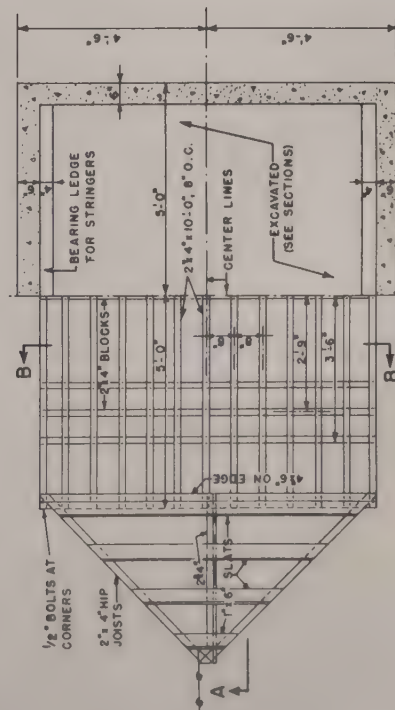
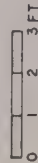
SECTION B-B

BILL OF MATERIAL

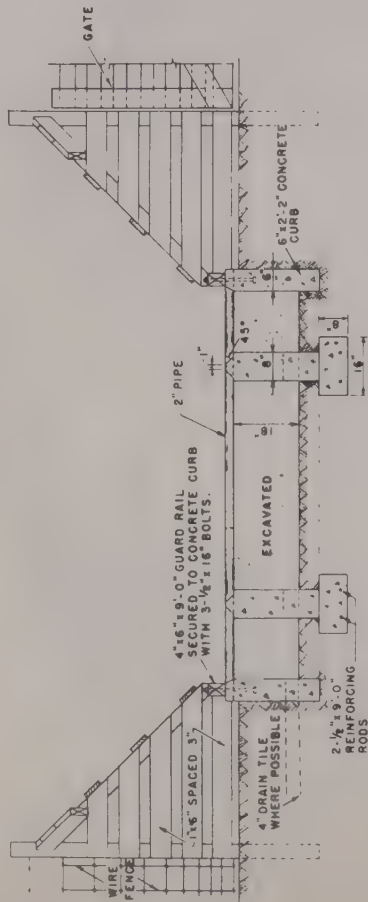
LUMBER	
FENCE POSTS:	2-PCS 4"x4"x7'-0"
FRAMING:	3-PCS 2"x12"x10'-0"
	7-PCS 2"x12"x8'-0"
	13-PCS 2"x4"x10'-0"
	2-PCS 2"x4"x9'-0"
	3-PCS 2"x4"x8'-0"
	6-PCS 2"x4"x6'-0"
	9-PCS 1"x6"x8'-0"
	2-PCS 4"x6"x8'-0"
CONCRETE:	2 1/2 CU. YDS. (1:3:5 MIXTURE)
CEMENT:	12 SACKS
SAND:	1.25 CU. YDS.
MISCELLANEOUS:	2.13 CU. YDS.
ANCHOR BOLTS:	4-1/2"x1/2" GALVANIZED
REINFORCING RODS:	4-1/2" #16-9'
	2-1/2" #16-9'

NOTE:

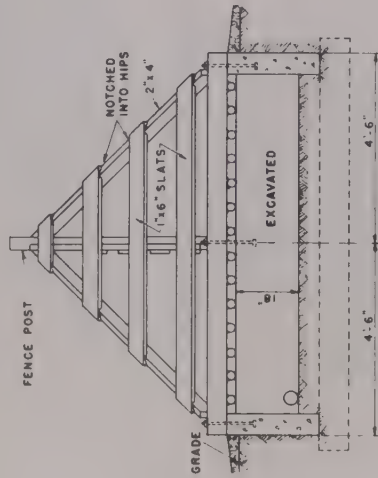
TIMBERS IN CONTACT WITH EARTH OR CONCRETE ARE TO BE PRESURE TREATED WITH PRESERVATIVE.



1/2 OF PLAN 1/2 OF FOUNDATION



SECTION A-A

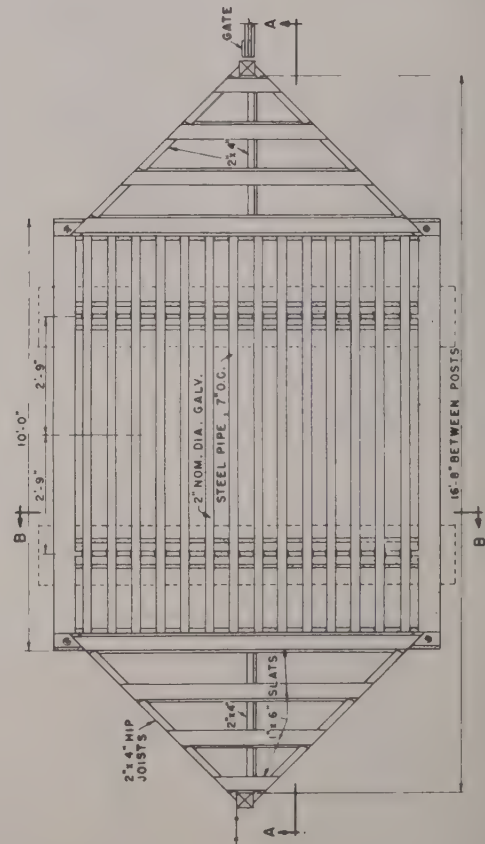


SECTION B-B

BILL OF MATERIALS

LUMBER	1. PCS 2" x 4" x 12'-0"
FRAMING	2. " 2" x 4" x 14'-0"
SLATS	6. " 1" x 6" x 12'-0"
GUARD RAILS	2. " 4" x 16" x 19'-0"
CONCRETE	2. " CU YDS. (1:3:5 MIXTURE)
AGGREGATE	1.4 CU YDS
MISCELLANEOUS	2.35 CU YDS
PIPES	14. PCS 2" NOM DIA EXTRA STRONG GALV STEEL PIPE OR RAILS, 10'-0" LONG
ANCHOR BOLTS	6. " 3/4" x 16"
REINFORCING	4. " 2 1/2" x 9'-0"

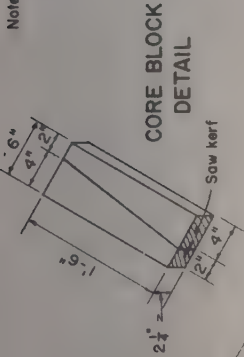
NOTE: A WIDE GATE ADJACENT TO GUARD IS SUGGESTED FOR PASSAGE OF EXTRA WIDE EQUIPMENT AND LIVESTOCK
ALL WOOD TO BE TREATED WITH PRESERVATIVE



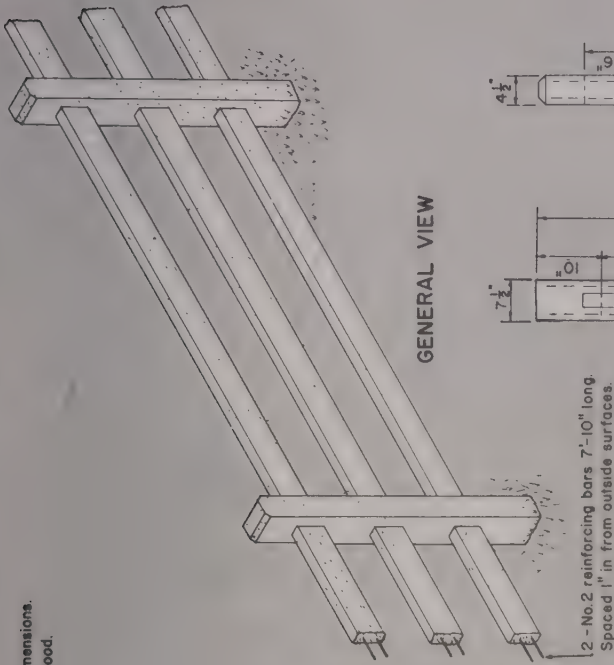
PLAN

SCALE 0 1 2 3 FT

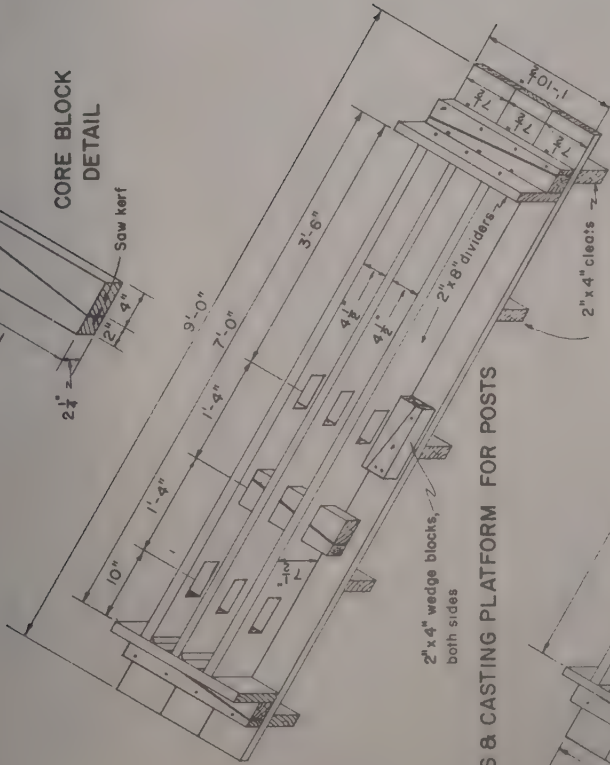
Note: Cut core block full dimensions.
Use seasoned hardwood.
Paint two coats.



GENERAL VIEW



FORMS & CASTING PLATFORM FOR POSTS



Use "C" clamps and 2"x4" yoke
on center of forms

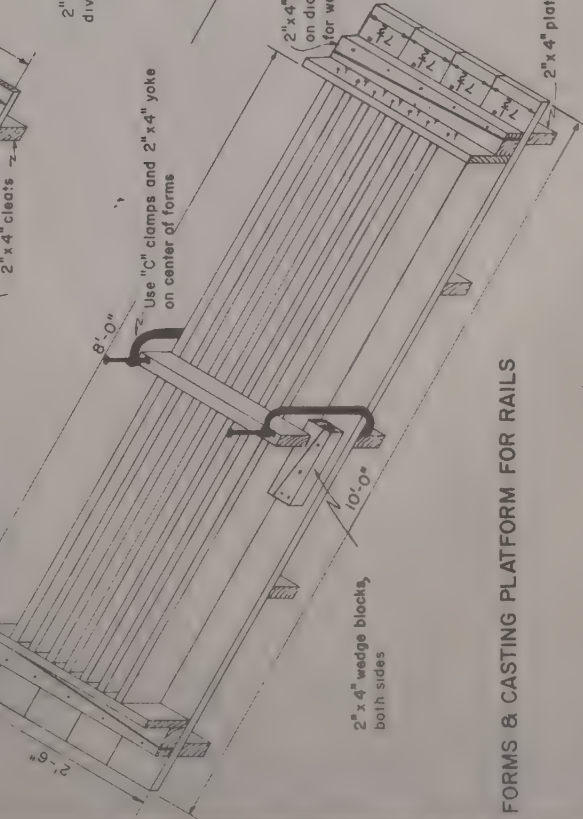
2"x6" dividers

Chisel marks to
identify re-assembly

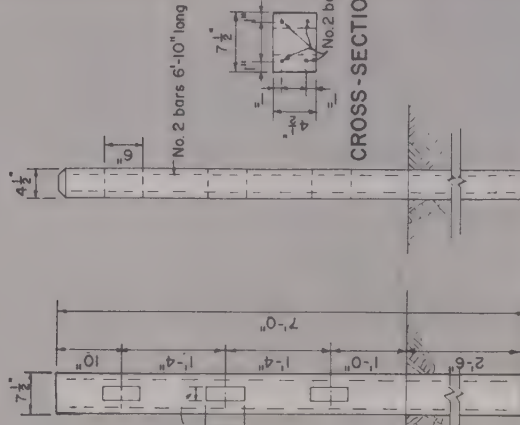
Drill 1/8" holes through
form end into dividers for
easy repeat assemblies
with 10d double-headed
forming nails as guides

RAIL FORM-END DETAILS

Post form - end similar

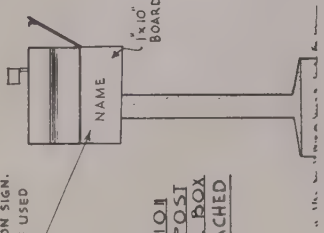


FORMS & CASTING PLATFORM FOR RAILS

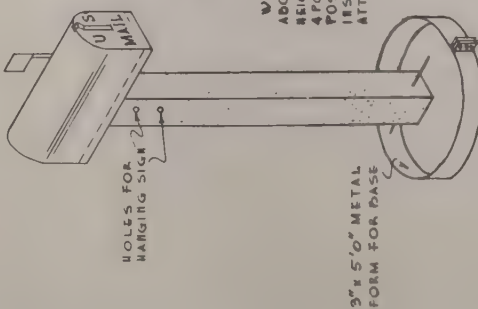


POST DETAILS

USE NAME ONLY ON SIGN.
THIS SIGN CANNOT BE USED
FOR ADVERTISING



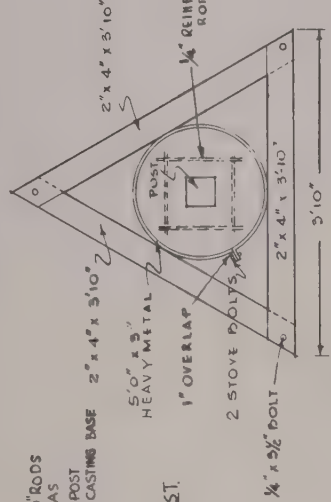
**ELEVATION
SHOWING POST
WITH MAIL BOX
& SIGN ATTACHED**



WIRE PLACED 2 1/2 TO 3'
ABOVE GROUND OR 3/4
HEIGHT OF ANIMAL. USE
4 POINT BARE WIRE
POSTS 3 TO 4 RODS APART.
INSULATE POSTS AND
ATTACH WIRES AS SHOWN.

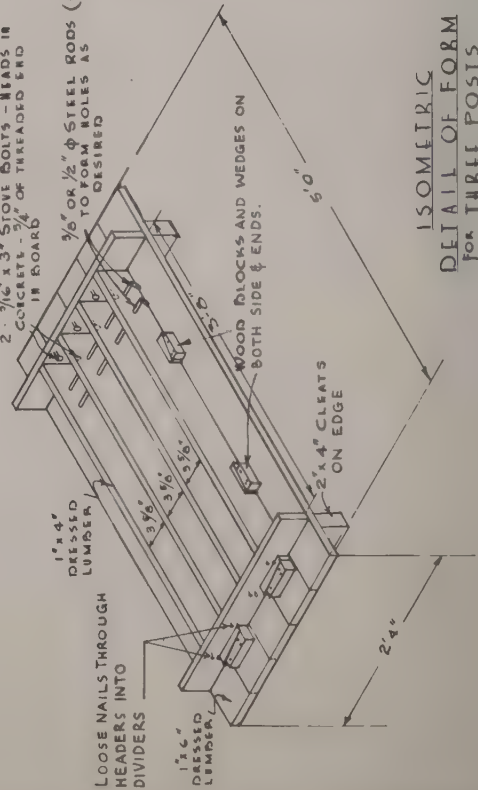
ELECTRIC FENCE POST

**POST IN CENTER OF
METAL FORM FOR
CASTING BASE**

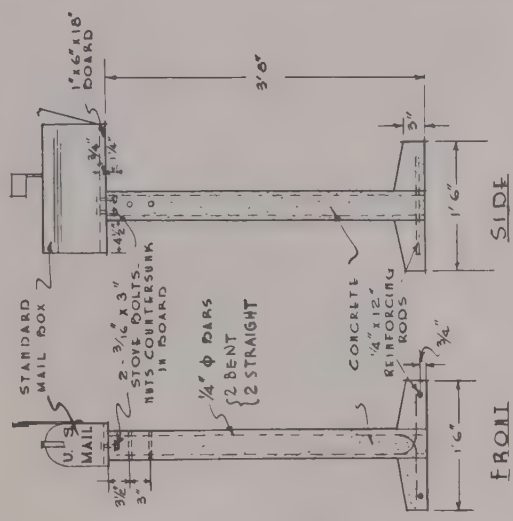


**DETAIL OF FORM FOR
CONCRETE BASE**

2 - 3/16" x 3" STOVE BOLTS - HEADS IN
CONCRETE - 3/4" OF
THREAD END



**ISOMETRIC
DETAIL OF FORM
FOR THREE POSTS**



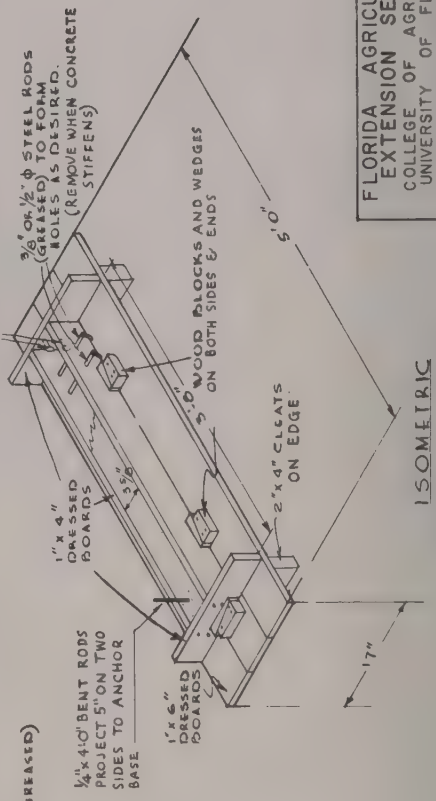
FRONT

SIDE

1/4" ϕ STEEL
RODS

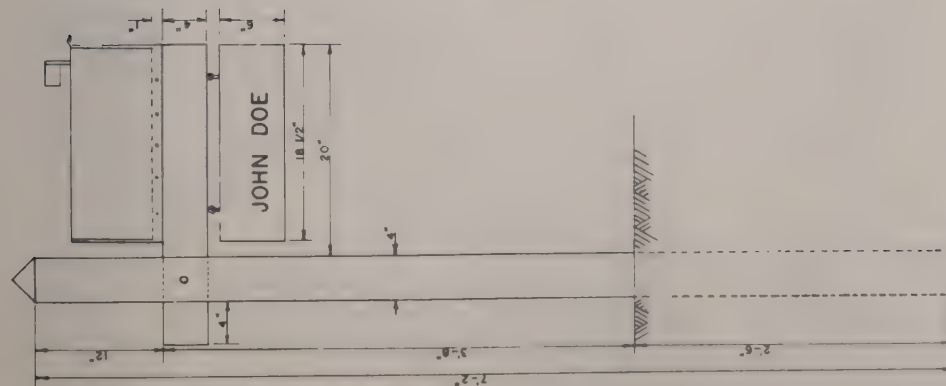
**CROSS SECTION
OF POST**

2 - 3/16" x 3" STOVE BOLTS
HEADS IN CONCRETE - 3/4" OF
THREAD END IN BOARD

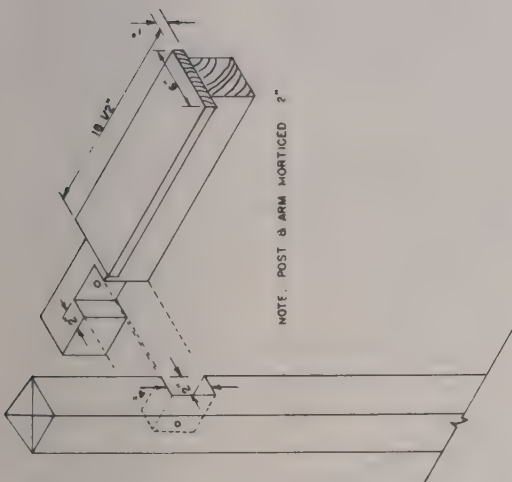


**ISOMETRIC
DETAIL OF FORM
FOR SINGLE POST**

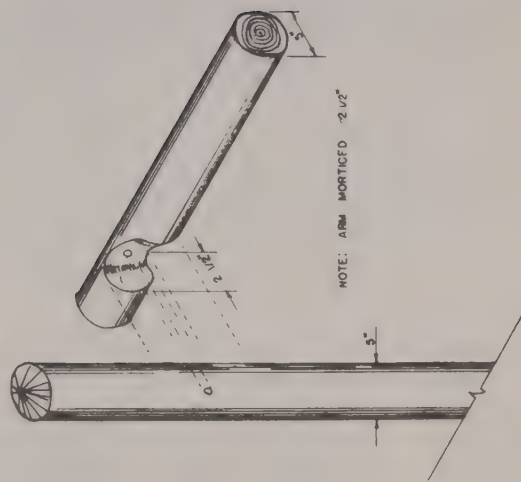
FLORIDA AGRICULTURAL
EXTENSION SERVICE
COLLEGE OF AGRICULTURE
UNIVERSITY OF FLORIDA
AND USDA COOPERATING
CONCRETE MAIL BOX
AND FENCE POST
FLA 1007
EXT AGR-ENGINEER-GAINESVILLE, FLA.



SIDE ELEVATION

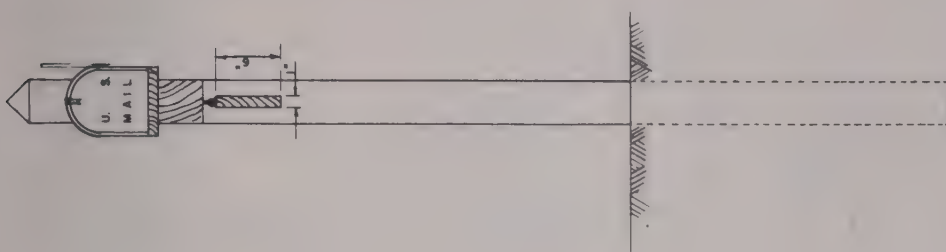


NOTE: POST & ARM MORTISED 2"



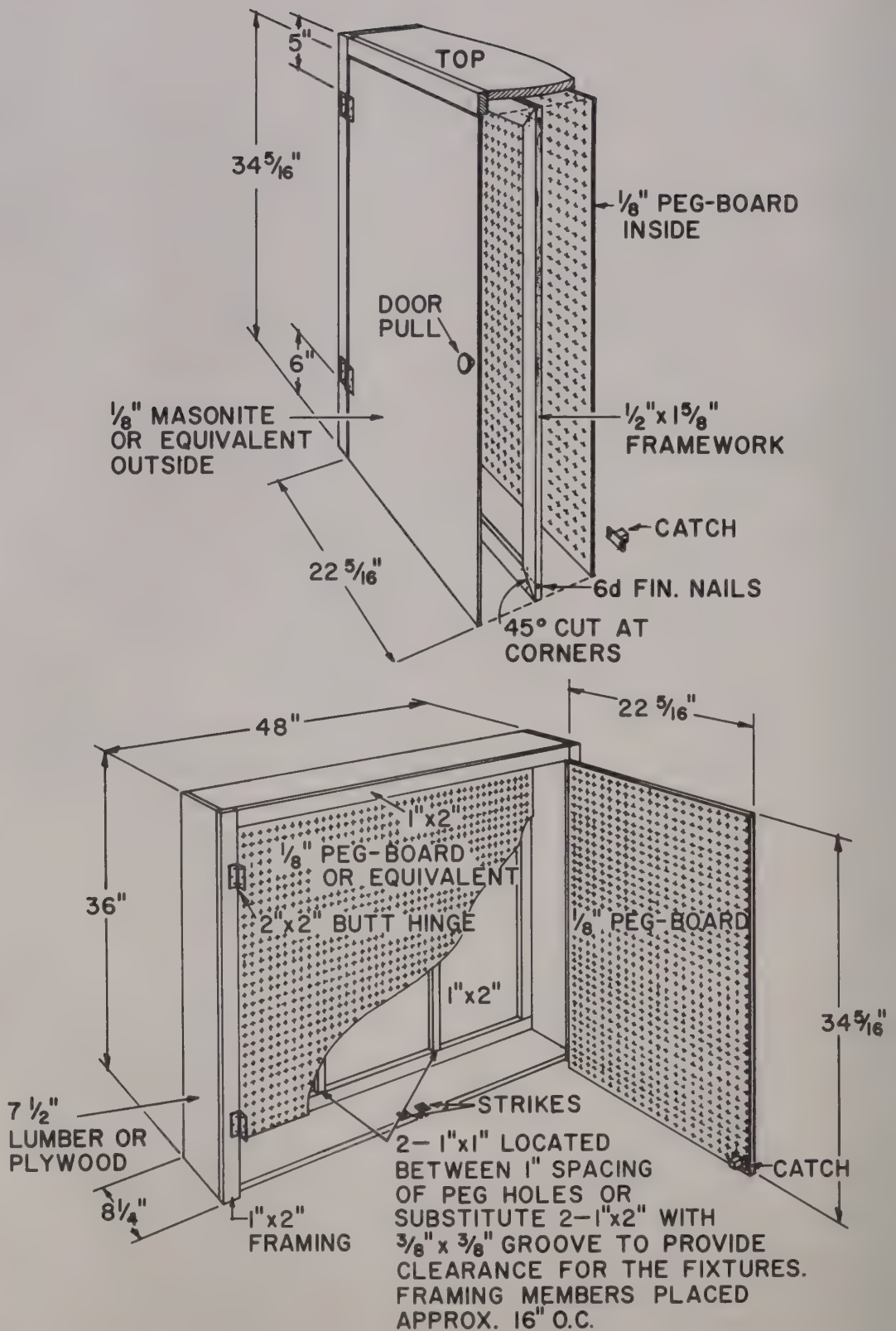
NOTE: ARM MORTISED 2 1/2"

NOTE: POST & ARM MADE OF EITHER 4"x4" OR 5" POLE
ISOMETRIC VIEWS



FRONT ELEVATION

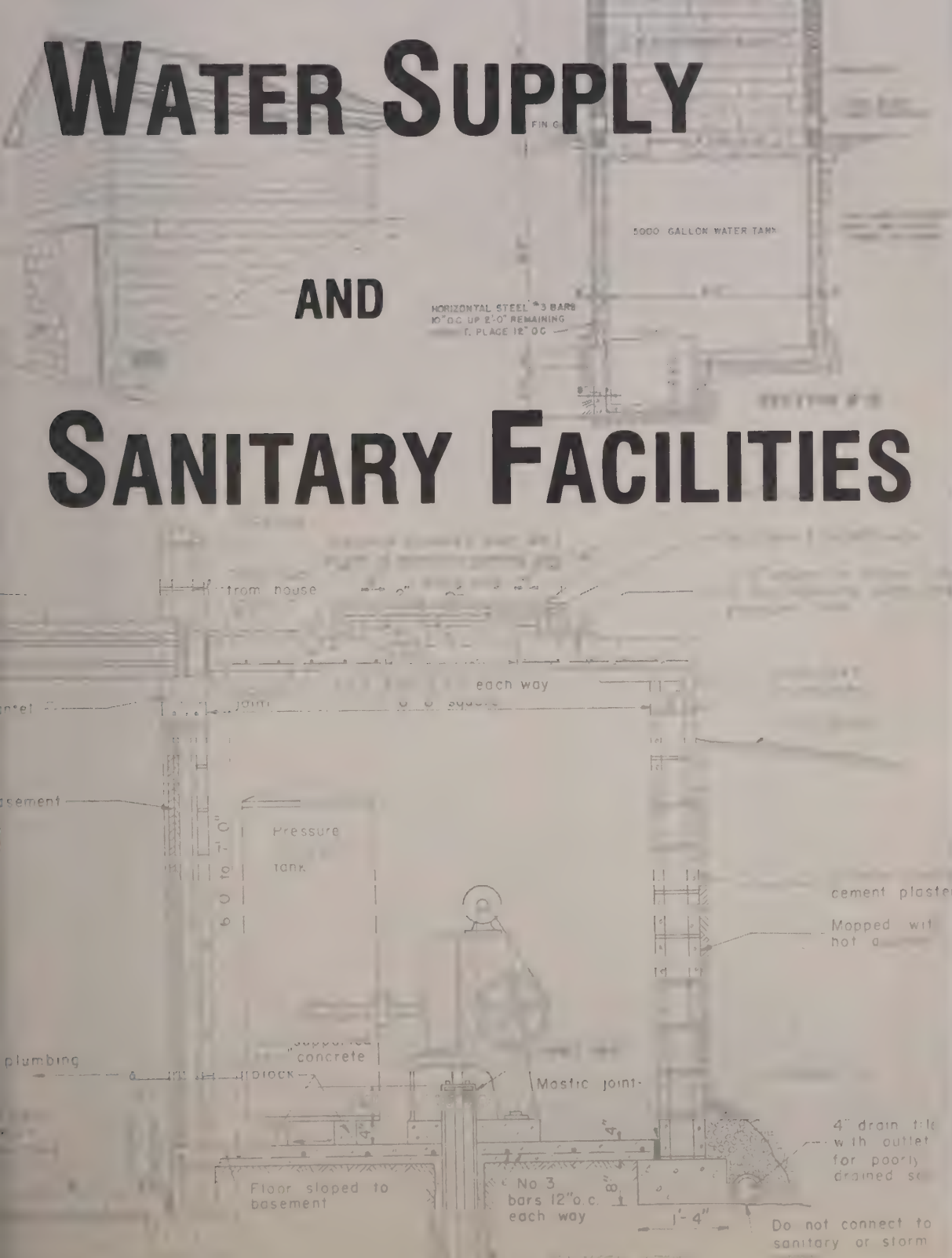
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS STATE OF SOUTH CAROLINA CLEMSON AGRICULTURAL COLLEGE UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATION			
MAIL BOX POST & NAME PLATE			
2/15/54	2003	SHEET 1 OF 1	DESIGNED BY P. H. J.
		TRACED BY P. H. J.	APPROVED BY P. H. J.

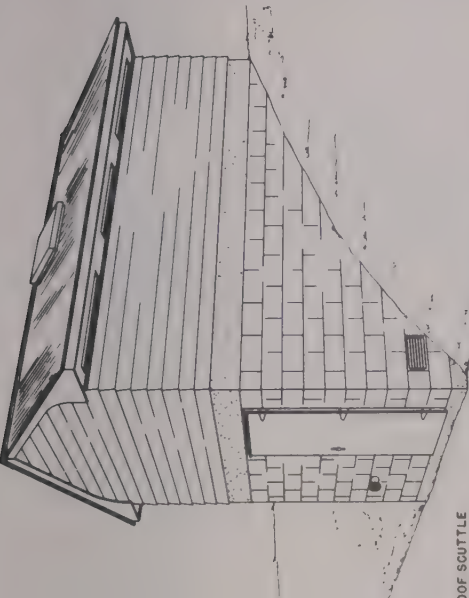


WATER SUPPLY

AND

SANITARY FACILITIES



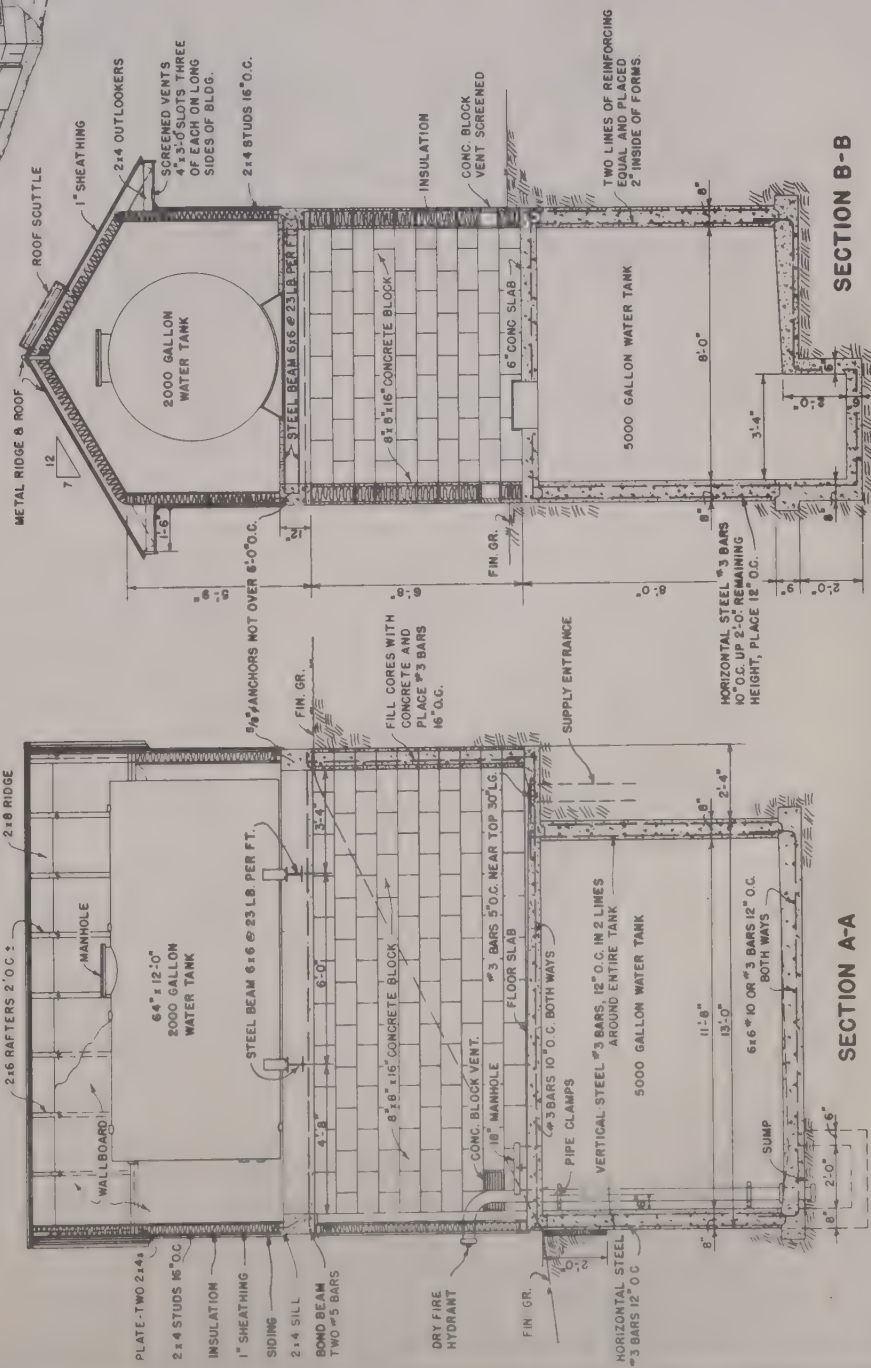


PERSPECTIVE VIEW

NOTES:

- CHECK INSURANCE REGULATIONS FOR WATER STORAGE REQUIREMENTS
- PROVIDE GROUNDED DOUBLE CONVENIENCE OUTLETS.
- WALLS AND ROOF OF BUILDING TO BE INSULATED IN LOCALITIES SUBJECT TO FREEZING TEMPERATURES
- EQUIP WITH ADEQUATE LIGHTNING PROTECTION SYSTEM IN AREAS WHERE NEEDED.

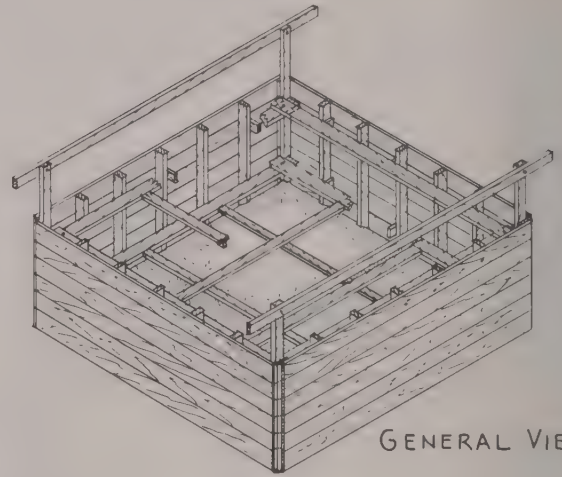
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AGRICULTURAL ENGINEERING DEPARTMENT MICHIGAN STATE UNIVERSITY, E. LANSING UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING	
FARMSTEAD WATER SUPPLY SYSTEM	
USDA	'63
EX. 5963	SHEET 1 OF 1
PLAN FILE NO. 855	



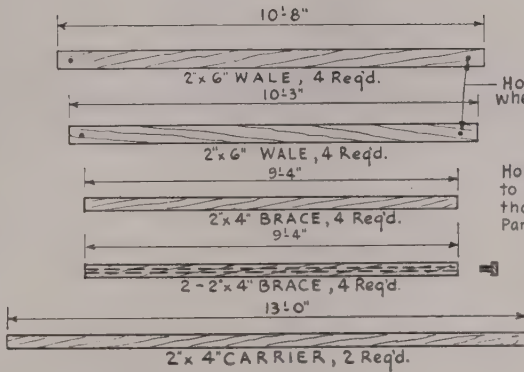
SECTION A-A

SECTION B-B

FORMING FOR FIRE CISTERN

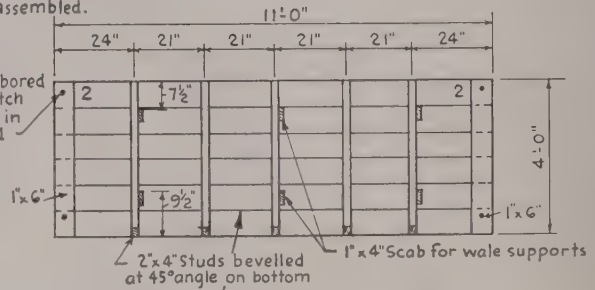


GENERAL VIEW

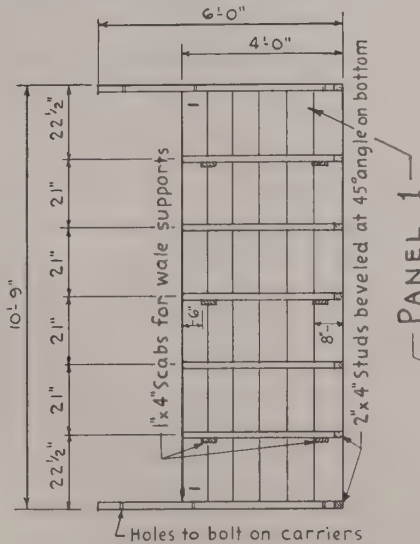


Holes bored to match when assembled.

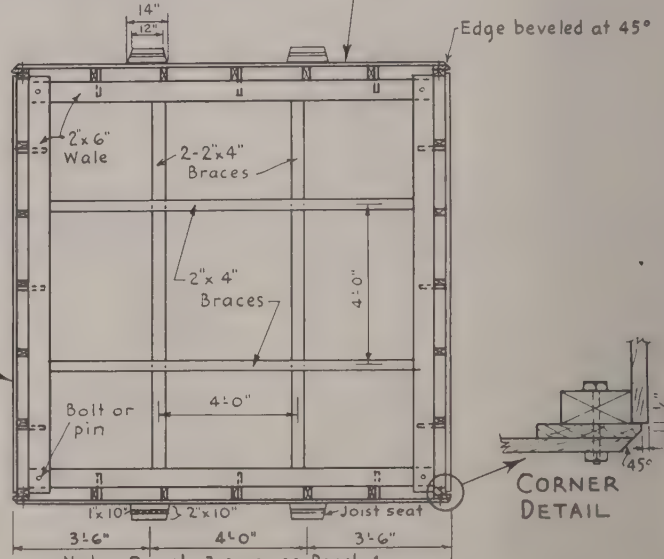
Holes bored to match those in Panel 1



PANEL 2



PANEL 1



CORNER
DETAIL

ESTIMATE OF MATERIALS				
Size	Description	Length	No. of pieces	F. B. M.
2" x 4"	Studs	8'-0"	10	54
2" x 4"	"	12'-0"	2	16
2" x 4"	Braces	10'-0"	12	80
2" x 4"	Carriers	14'-0"	2	19
2" x 6"	Wales	12'-0"	8	96
1" x 6"	Sheathing			225
2" x 10"	Joist seat form	10'-0"		17
1" x 10"	"	6'-0"		5
1/2" x 4"	Bolts		20	

PLAN VIEW OF ASSEMBLED FORM

CONCRETE FIRE CISTERN

ESTIMATE OF MATERIALS

Steel Bars:

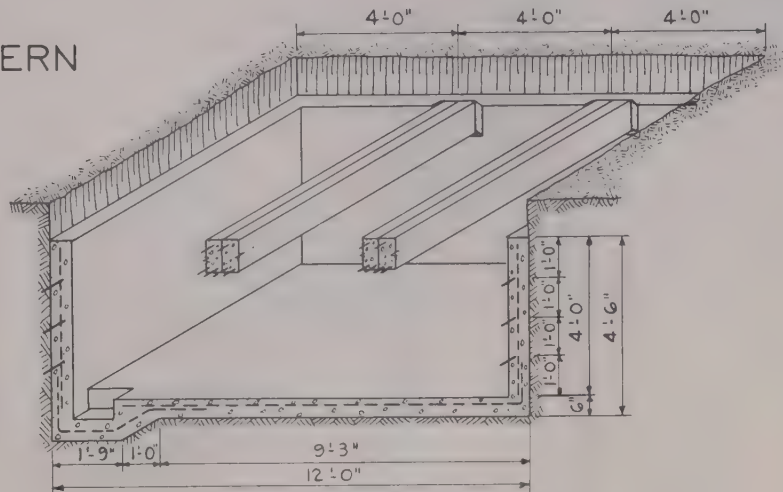
4 - $\frac{1}{2}$ " ϕ - 11'4" long
 12 - $\frac{1}{2}$ " ϕ - 12'6" "
 8 - $\frac{3}{8}$ " ϕ - 11'4" "

Welded Wire Mesh:

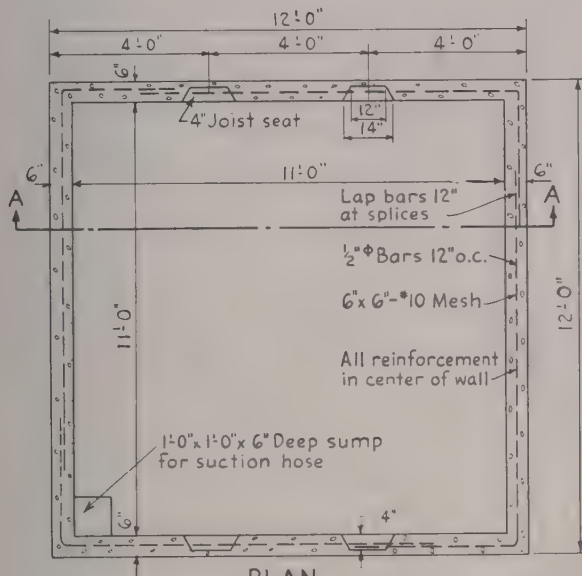
6" x 6" - #6 Gage 300 Sq. Ft.
 6" x 6" - #10 " 200 " "

Concrete 1:2 $\frac{1}{4}$:3 Mix.

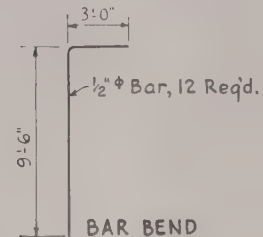
9 Cu. Yd. (or 56 sacks cement
 5 yd. sand, 6 $\frac{1}{2}$ yd. coarse agg.)
 2 - 10" Concrete tile



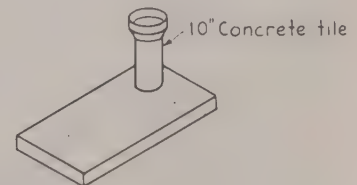
SECTION VIEW



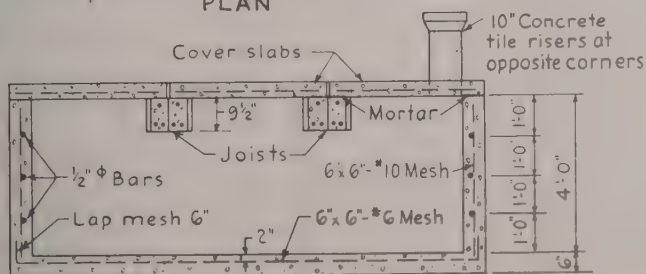
PLAN



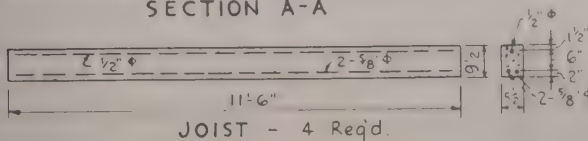
BAR BEND



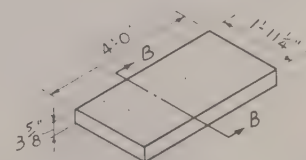
COVER SLAB WITH TILE RISER
2- Req'd.



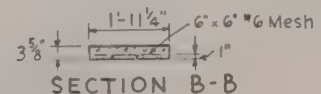
SECTION A-A



JOIST - 4 Req'd.



COVER SLAB - 16 Req'd.



SECTION B-B

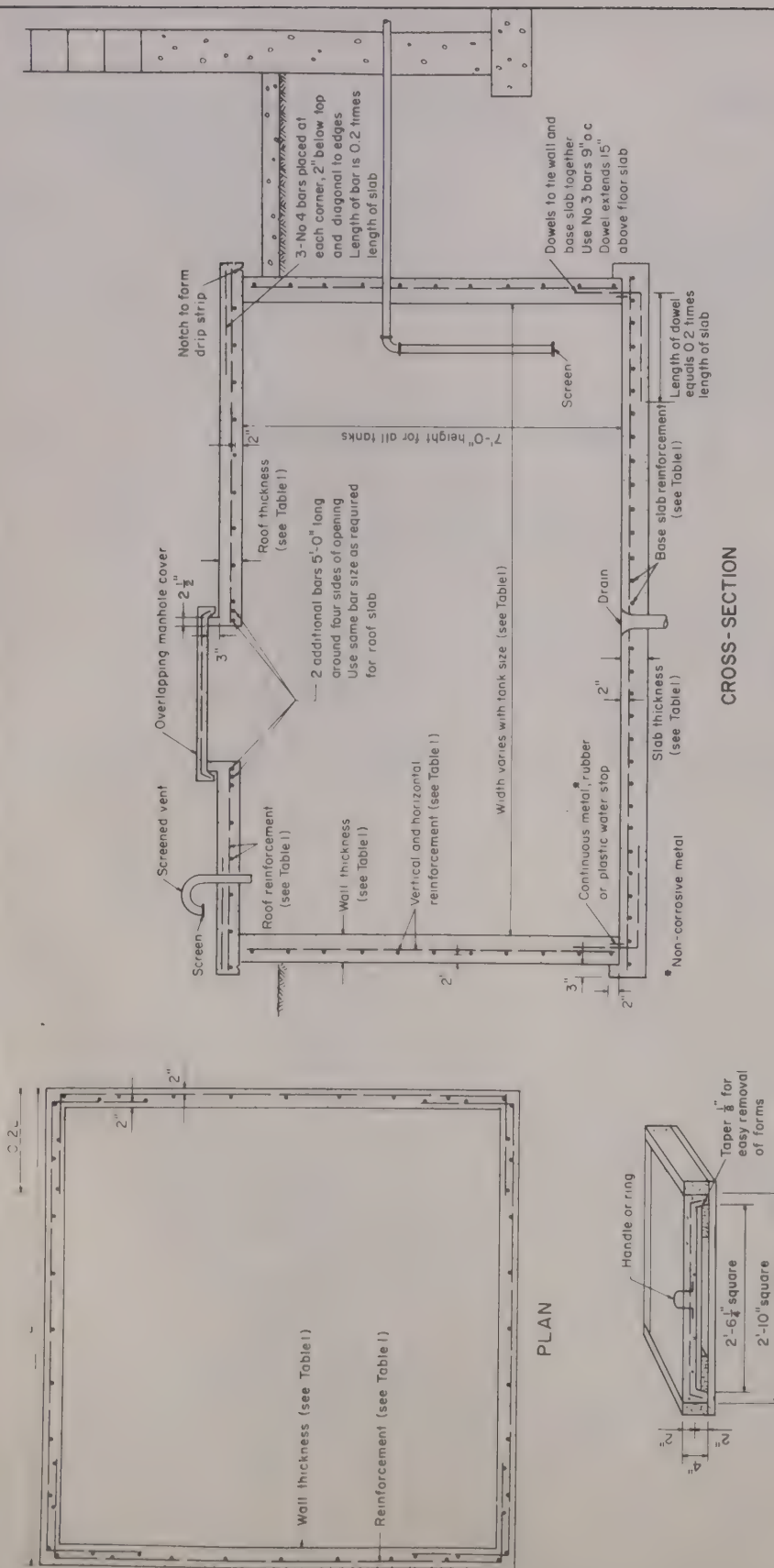


TABLE I - Design Data for Cast-in-Place Concrete Water Cisterns

Tank Capacity U.S. Gal.	Tank Size O.D.	Tank Size I.D.	Thickness, in.				Reinforcement			Concrete, Cu.Yd.		
			Base Slab	Wall	Roof	Base Slab	Horiz. Bars	Vert. Bars	Roof	Base Slab	Wall	Roof
5250	4.370	7'-10" x 11' x 11'	6	6	4	No 4 bars 7" o c both ways	No 4 bars 10" o c	No 4 bars 18" o c	No 4 bars 8" o c both ways	2.50	5.50	1.75
7560	6300	7'-11" x 13' x 13'	6	6	5	No 4 bars 5" o c both ways	No 4 bars 8" o c	No 4 bars 18" o c	No 4 bars 8" o c both ways	3.50	6.50	3.00
10,290	8570	7'-11" x 15' x 15'	6	6	5	No 5 bars 6" o c both ways	No 4 bars 6" o c	No 4 bars 18" o c	No 5 bars 9" o c both ways	5.25	7.50	3.75
15,170	12,640	8'-1" x 18'-2" x 18'-2"	7	7	6	No 5 bars 5" o c both ways	No 5 bars 8" o c	No 4 bars 18" o c	No 5 bars 1 1/2" o c both ways	7.50	10.50	6.50
23,150	19,280	8'-3" x 22'-2" x 22'-2"	8	7	7	No 6 bars 6" o c both ways	No 5 bars 6" o c	No 4 bars 18" o c	No 6 bars 8" o c both ways	13.00	13.00	11.00

NOTE

CONSTRUCTION SEQUENCE

1. Construct base slab
2. Construct walls
3. Construct roof

CONCRETE

When using ready-mixed concrete specify a mix containing 6 1/2 bags of cement per cu. yd. and not over 6 gal. of water per bag of cement

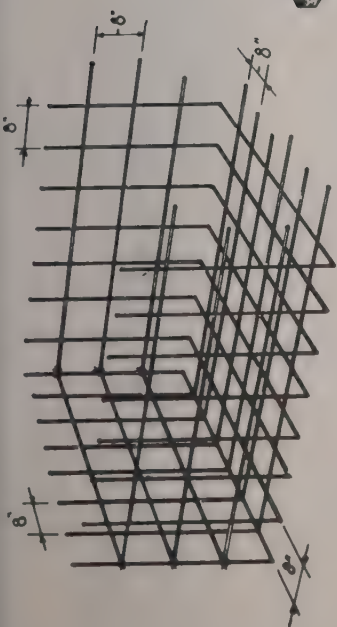
This tank may also be used for liquid manure storage

WATER CISTERN

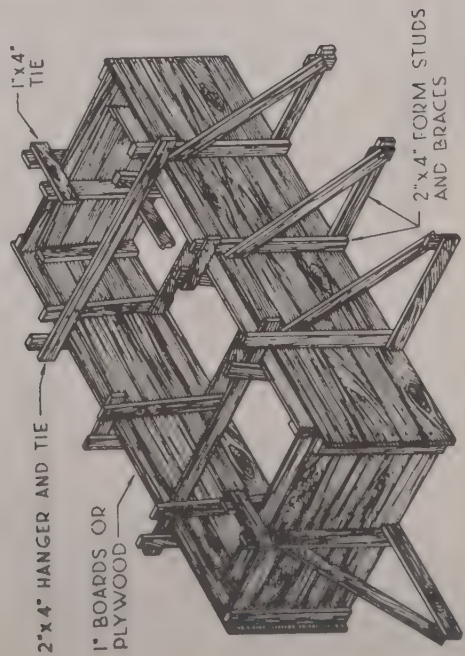
THIS IS A TYPICAL DESIGN AND SHOULD NOT BE USED AS A BASIS FOR THE PREPARATION OF COMPLETE PLANS WHICH SHOULD BE PREPARED BY A QUALIFIED ENGINEER AND SHOULD CONFORM WITH LOCAL REQUIREMENTS. WORKING DRAWINGS SHOULD BE PREPARED AND APPROVED BY A QUALIFIED ENGINEER OR ARCHITECT.

PORTLAND CEMENT ASSOCIATION

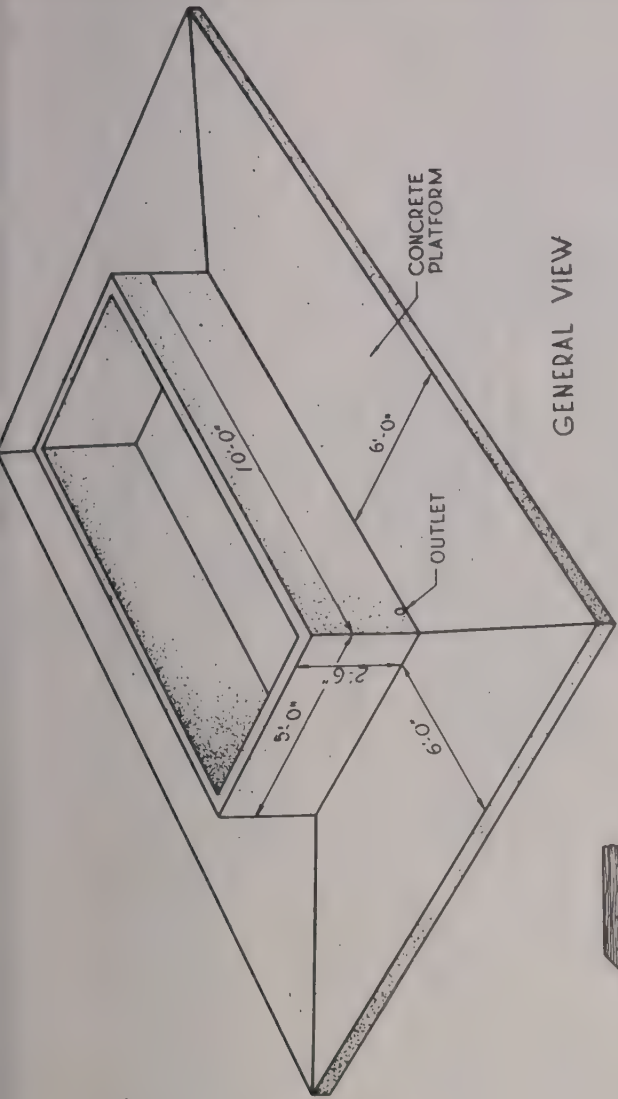
FP 701



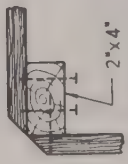
ALL REINFORCING BARS ARE $\frac{3}{8}$ " ROUND
SPACED ABOUT 8" O.C. BOTHWAYS
REINFORCEMENT DETAIL



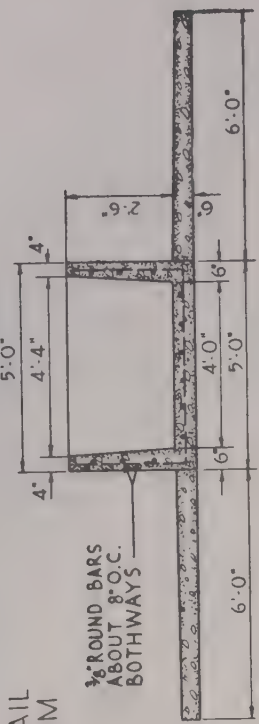
GENERAL VIEW OF FORMS



GENERAL VIEW



CORNER DETAIL
OF INSIDE FORM



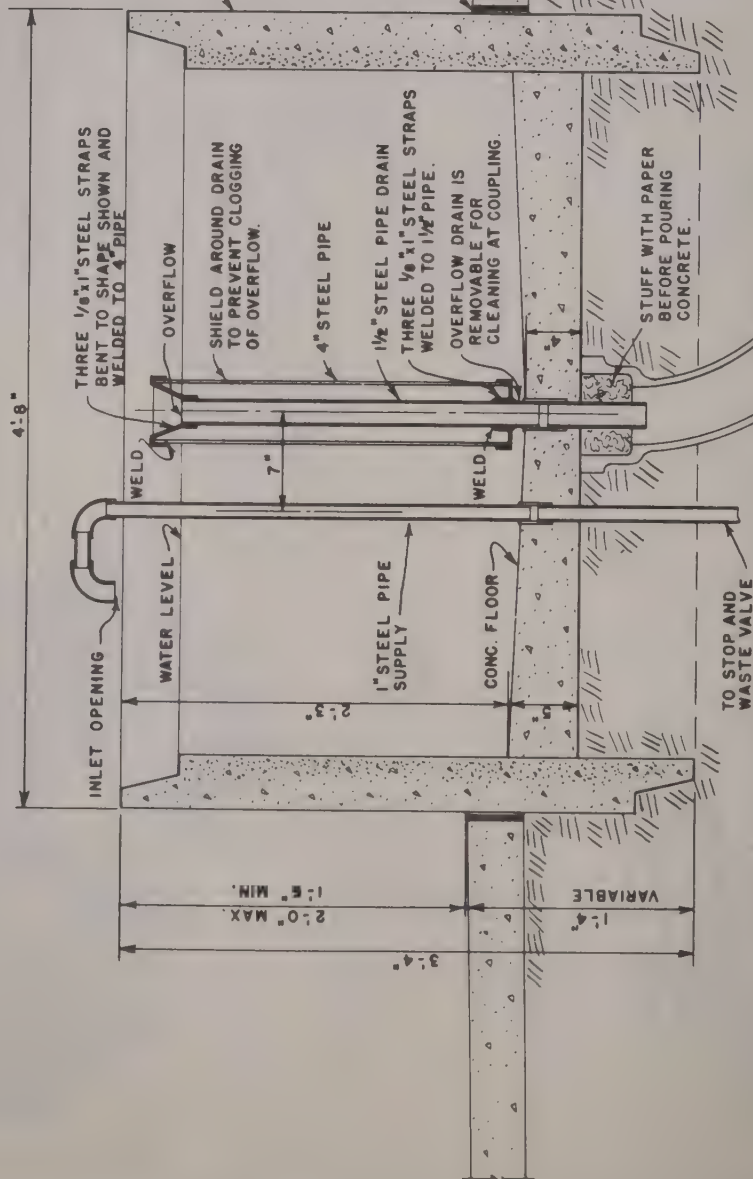
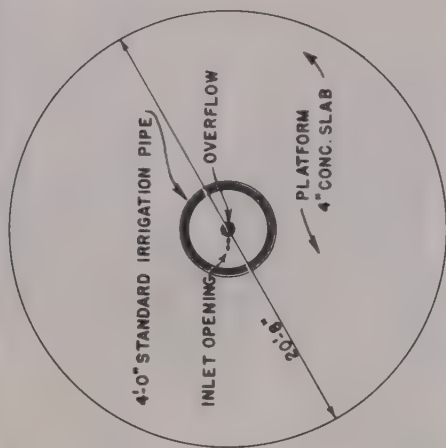
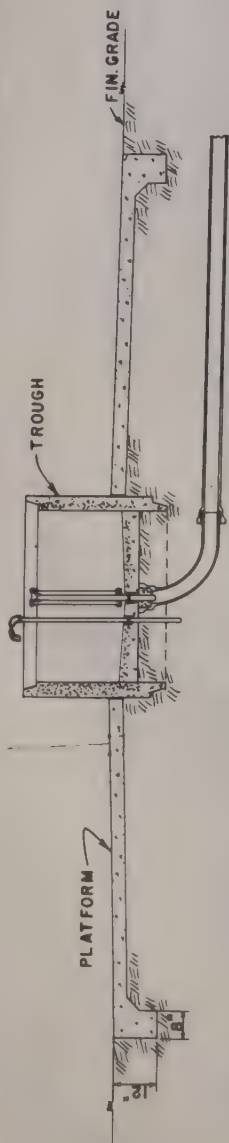
CROSS SECTION

NOTE:
SUGGESTED CONCRETE MIX: 1 SACK PORTLAND CEMENT
TO 2 1/4 CU FT. SAND TO 3 CU FT. GRAVEL WITH NO MORE
THAN 5 GAL. OF WATER ADDED PER SACK OF CEMENT
FOR AVERAGE MOIST SAND.

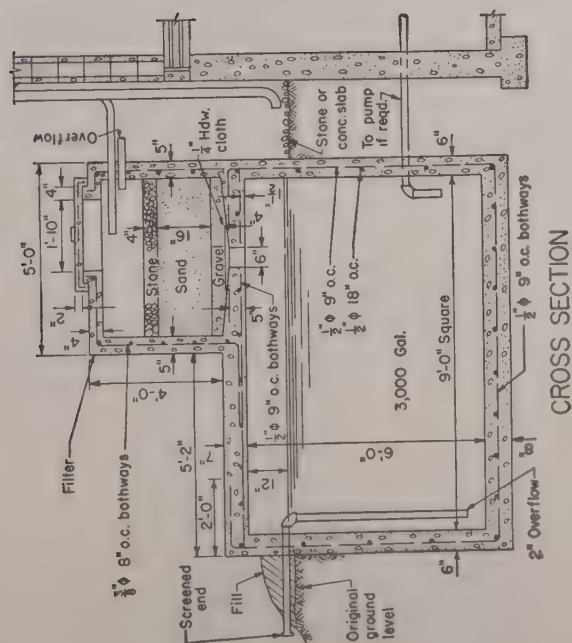
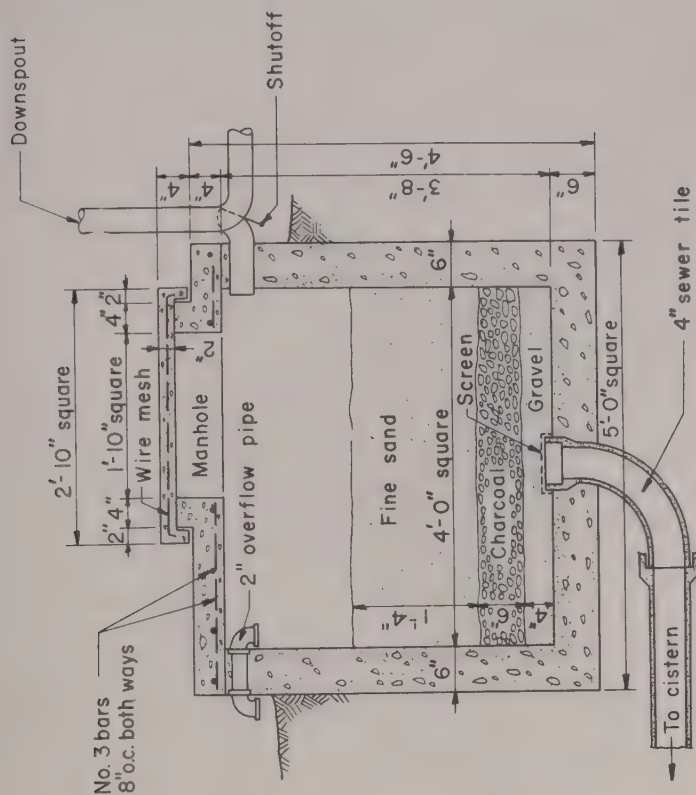
AS SOON AS CONCRETE HARDENS IT SHOULD BE
PROTECTED FROM DRYING OUT FOR AT LEAST 7 DAYS.
COVER TANK AND KEEP COVERINGS WET DURING THIS PERIOD

MATERIALS REQUIRED FOR
TANK 10 FT. LONG
1 1/2 1/4: 3 CONCRETE MIX
14 SACKS PORTLAND CEMENT
1 1/2 CU YD SAND
1 1/4 CU YD GRAVEL

COOPERATIVE EXTENSION WORK IN AGRICULTURE & HOME ECONOMICS STATE OF FLORIDA UNIVERSITY OF FLORIDA EXTENSION AGRICULTURAL ENGINEER GAINESVILLE, FLA.	
P.C.A.	BL. 302
CONCRETE WATER TROUGH	
SHEET 1 OF 1	



NOTE:
IF DESIRED A FLOAT MAY BE INSTALLED ON INLET PIPE
TO CONTROL THE LEVEL AND FLOW OF WATER.



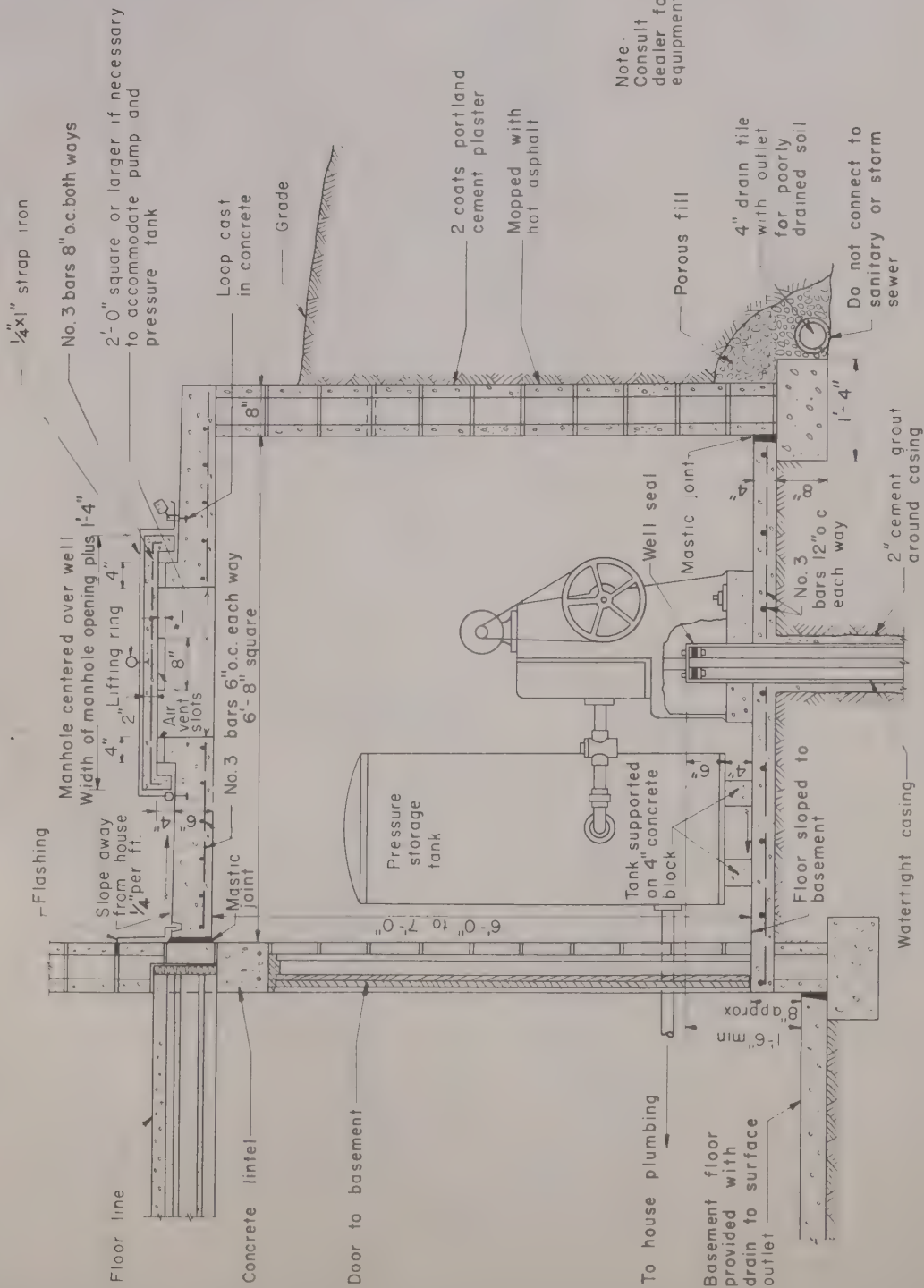
SAND FILTER FOR CISTERN

THIS IS A TYPICAL DESIGN AND SHOULD NOT BE USED AS A WORKING DRAWING. IT IS INTENDED TO BE HELPFUL IN THE PREPARATION OF COMPLETE PLANS WHICH SHOULD BE ADAPTED TO LOCAL CONDITIONS AND SHOULD CONFORM WITH LEGAL REQUIREMENTS.

WORKING DRAWINGS SHOULD BE PREPARED AND APPROVED BY A QUALIFIED ENGINEER OR ARCHITECT.

PORTLAND CEMENT ASSOCIATION

FP 709



Note.
Consult pump manufacturer or dealer for best arrangement of equipment in pump pit

CROSS SECTION

PUMPHOUSE

THIS IS A TYPICAL DESIGN AND SHOULD NOT BE USED AS A WORKING DRAWING. IT IS INTENDED TO BE HELPFUL IN ADAPTING TO LOCAL CONDITIONS AND SHOULD CONFORM TO THE REQUIREMENTS OF THE LOCAL HEALTH DEPARTMENT. WORKING DRAWINGS SHOULD BE PREPARED AND APPROVED BY A QUALIFIED ENGINEER OR ARCHITECT.

PORTLAND CEMENT ASSOCIATION

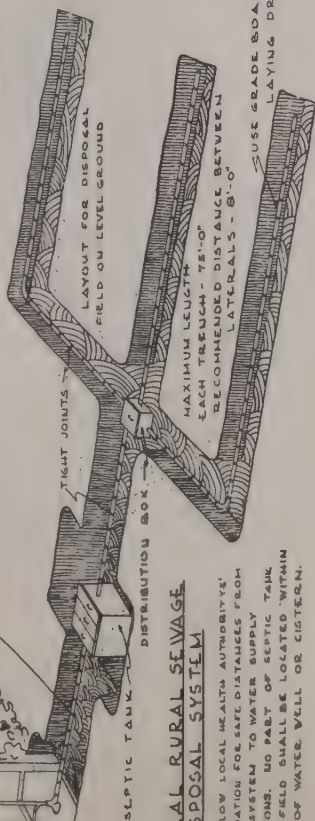
FP 740

THIS IS A TYPICAL DESIGN AND SHOULD NOT BE USED AS A WORKING DRAWING. IT IS HERE SHOWN ONLY FOR THE PREPARATION OF THE PLANS WHICH SHOULD BE ADAPTED TO LOCAL CONDITIONS AND SHOULD CONFORM WITH LEGAL REQUIREMENTS

WORKING DRAWINGS SHOULD BE PREPARED AND APPROVED BY A QUALIFIED ENGINEER OR ARCHITECT

FP 743



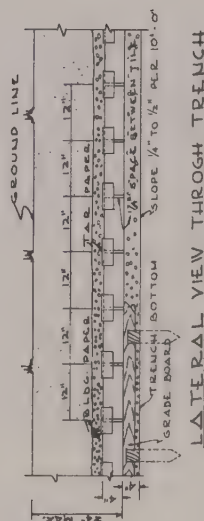


TYPICAL RURAL SEWAGE DISPOSAL SYSTEM

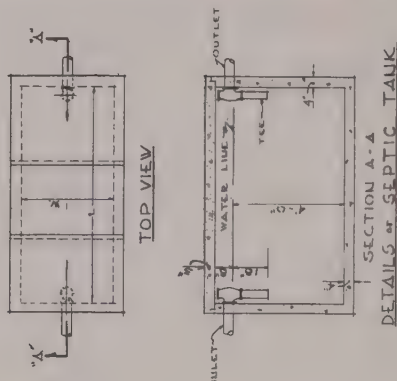
NOTE: FOLLOW LOCAL HEALTH AUTHORITIES' RECOMMENDATION FOR SAFE DISTANCES FROM DISPOSAL SYSTEM TO WATER SUPPLY INSTALLATIONS. NO PART OF SEPTIC TANK OR DRAIN FIELD SHALL BE LOCATED WITHIN 50 FEET OF WATER WELL OR CISTERN.



DETAIL of TILE FIELD



LATERAL VIEW THROUGH TRENCH



DETAILS OF SEPTIC TANK

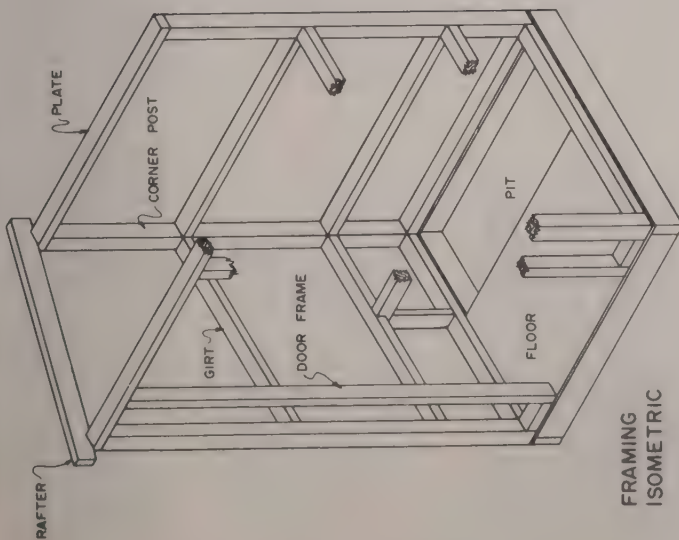
QUALITY	DEPTH	W.D.M	SECTION	DRAIN FILE
140	4'-0"	3'-0"	3	GREEN FOR SECTION 8
250	7'-0"	3'-0"	3	CHARTER 5
735	7'-0"	3'-6"	3	"
825	7'-0"	3'-6"	3	"
920	8'-0"	3'-0"	4	"
1020	8'-6"	3'-0"	4	"
1125	9'-0"	4'-2"	4	"
1215	9'-0"	4'-6"	4	"

NOTE: THE ABOVE INDICATES PROPER DIRECTION OF A SEPTIC TANK. THIS OR ANY FIELD AND DRAINAGE SOIL WITH APPROPRIATE DRAINAGE PLANS FOR TANKS GOING TO GULLIES SHALL BE SUBMITTED TO THE FLORIDA STATE BUREAU OF HEALTH FOR APPROVAL IN ACCORDANCE WITH SECTION 101.06, CHAPTER 101 OF THE FLORIDA STATE SANITARY CODE. PERMIT FOR THE CONSTRUCTION OF A SEPTIC TANK SYSTEM SHALL BE OBTAINED FROM THE LOCAL COUNTY HEALTH DEPT. PRIOR INSTALLATION.

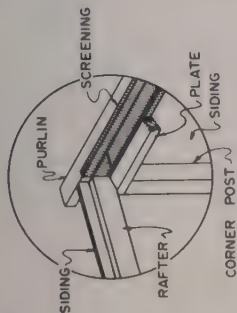
* FROM: SEPTIC-TANK-DISPOSAL- SYSTEM
FLORIDA STATE BOARD OF HEALTH
BUREAU OF SANITARY ENGINEERING
DAVID B LEE- DIRECTOR
JACKSONVILLE- FLORIDA

FLORIDA AGRICULTURAL
EXTENSION SERVICE
COLLEGE OF AGRICULTURE
UNIVERSITY OF FLORIDA
AND USDA COOPERATING

SEPTIC-TANK-DISPOSAL-SYSTEM



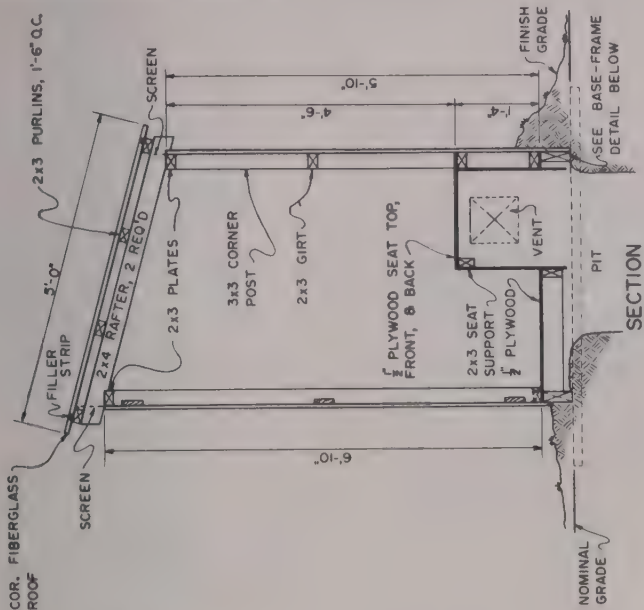
FRAMING
ISOMETRIC



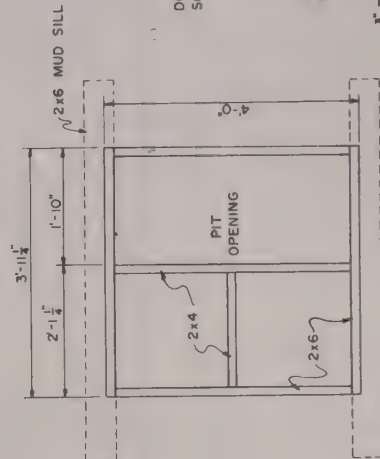
SCREENING
DETAIL

NOTES:

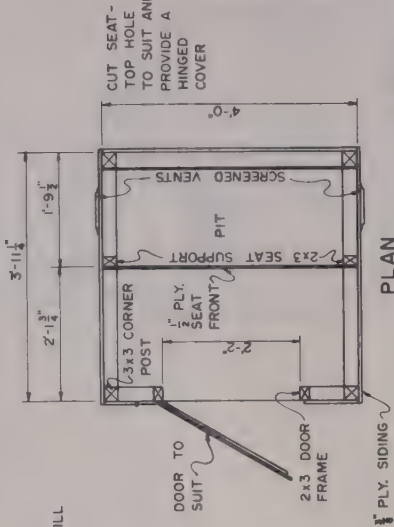
1. ALL PLYWOOD TO BE EXTERIOR TYPE.
2. ALL WOOD BELOW SEAT LEVEL SHOULD BE PRESERVATIVE TREATED.
3. ALL FASTENINGS AND METAL PARTS TO BE CORROSION RESISTANT.



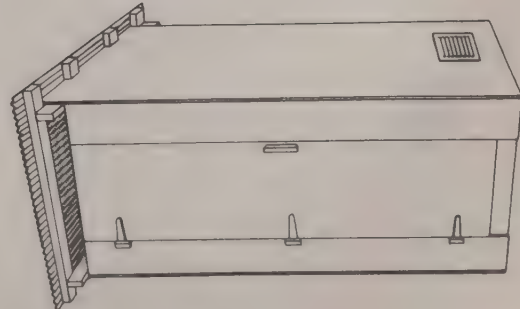
SECTION



BASE FRAMING PLAN



PLAN

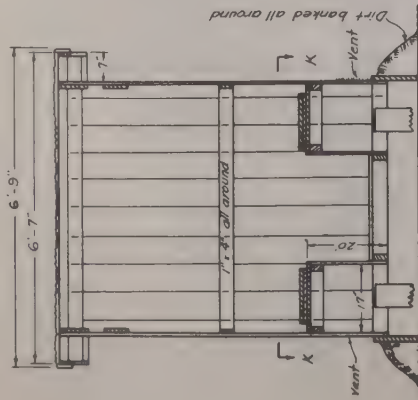


PERSPECTIVE

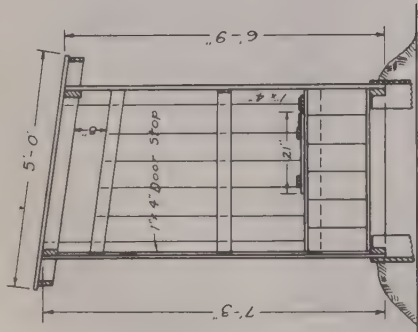
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AGRICULTURAL ENGINEERING DEPARTMENT MICHIGAN STATE UNIVERSITY, E. LANSING AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
PIT - TYPE	PRIVY	
MASS. '68	EX 6054	SHEET 1 OF 1
FILING CODE NO. 851		

OBTAIN APPROVAL OF LOCAL HEALTH AUTHORITIES
BEFORE STARTING CONSTRUCTION

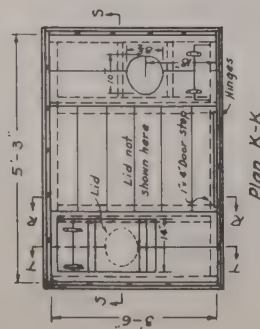
MASS. PS-8



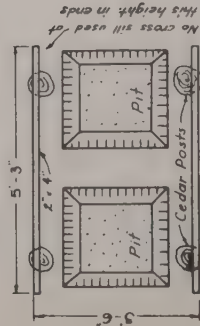
Section at S-S on Plan



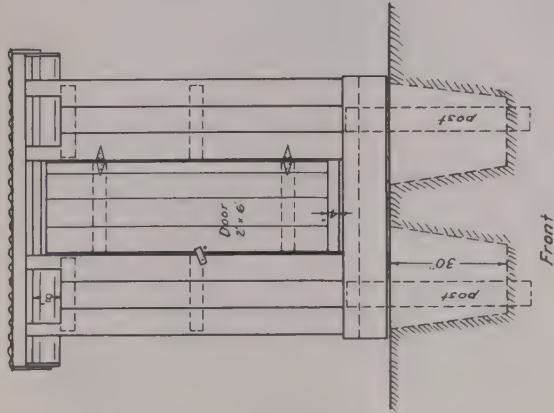
Section at R-R on Plan



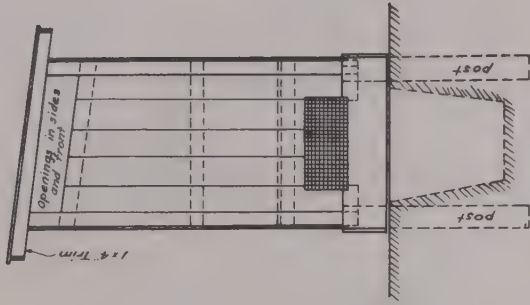
Plan K-K



Plan of Pits



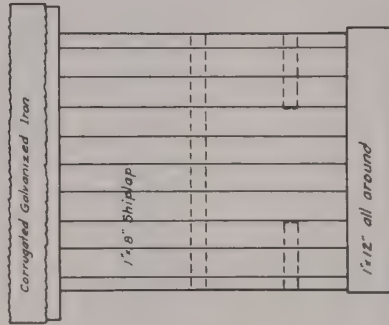
Front



Side

MATERIAL SCHEDULE

- 4 Posts 4' long (cedar)
- 2-1' x 4" x 9' Boards
- 4-2' x 4" x 12' Framing
- 1-2' x 6" x 7'
- 2-4' x 6" x 7'
- 13 Posts 1' x 8" Ship Lap
- 8 Posts 1' x 8" x 8"
- 3-1' x 4" x 12'
- 3-1' x 4" x 12'
- 4 Posts 3' long iron, 5' long
- 3 x 24 Copper fly screen
- 5 x 24 Hardware cloth
- 2 pr. 3" strap hinges
- 2 pr. 3" strap hinges
- Nails and 1/4 gal paint



Rear - to the north preferable

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS	
THE TEXAS A. & M. COLLEGE SYSTEM AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING	
G. G. GIBSON, DIRECTOR, COLLEGE STATION, TEXAS	
LOW COST TWO PIT EARTH PRIVY	
DRAWN BY: F. E. G.	SHEET 1 OF 1
TRACED BY VAYRA	REV JAN, 1954
SERIAL NO. 154	

HOLES FOR 3/4" Ø BOLTS

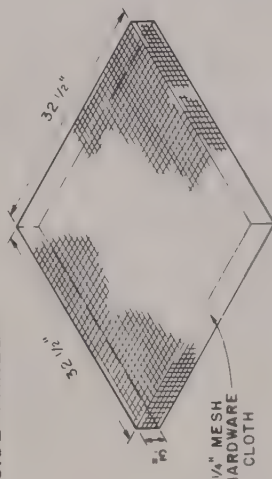
BILL OF MATERIALS

- CONCRETE: 1:2:3 MIX
 1 SACK OF CEMENT
 2 CU. FT. OF SAND
 3 CU. FT. OF GRAVEL
 10-1/4" RODS 3/4" LG.
 20-1/4" RODS 22" LG.
 14-1/4" RODS 15 1/2" LG.
 7-1/4" Ø 22 1/2" LG. (WITH NUTS & 2" WASHERS)
 1-PIECE OF EXPANDED METAL 16"x24"
- REINFORCEMENT STEEL:
 1 SACK OF CEMENT
 2 CU. FT. OF SAND
 3 CU. FT. OF GRAVEL
 10-1/4" RODS 3/4" LG.
 20-1/4" RODS 22" LG.
 14-1/4" RODS 15 1/2" LG.
 7-1/4" Ø 22 1/2" LG. (WITH NUTS & 2" WASHERS)
 1-PIECE OF EXPANDED METAL 16"x24"
- BOLTS:
 7-1/4" Ø 22 1/2" LG. (WITH NUTS & 2" WASHERS)
 1-PIECE OF EXPANDED METAL 16"x24"

NOTE: THE CONCRETE SHOULD BE MIXED: 1 PART PORTLAND CEMENT, 2 PARTS SAND AND 3 PARTS GRAVEL. IF THE GRAVEL IS OF SUCH A CHARACTER AS TO BE DISINTEGRATED BY HEAT, IT WILL BE BEST TO USE BROKEN BRICK OR TERRA COTTA IN PARTICLES FROM 1/4" TO 1/2" IN SIZE.
 AS SOON AS THERE IS NO DANGER OF MARRING THEM, WITH MOIST STRAW, SACKS, OR EARTH AND LEFT FOR 2 TO 3 WEEKS TO THOROUGHLY AND SLOWLY HARDEN.

END PANELS

SIDE PANELS



REMOVABLE COVER

BILL OF MATERIALS

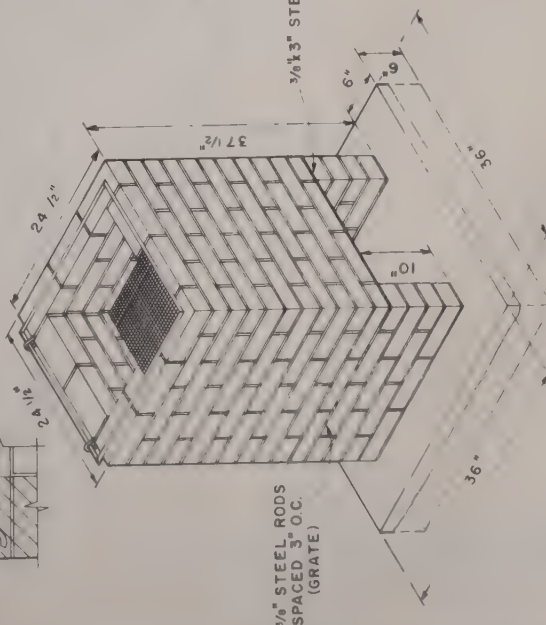
- 29 CONCRETE BLOCKS 7 5/8"x7 5/8"x15 5/8"
 1 SACK MASONRY CEMENT
 3 CU. FT. SAND
 1 PC. 3/8"x6"x24" STEEL PLATE
 5 PCS. 3/8" Ø STEEL RODS 31 5/8" LG. (GRATE)
 1 PC. 1/4" MESH HARDWARE CLOTH 39" SQUARE

NOTE: 3/8" MORTAR JOINTS
 VOIDS IN TOP COURSE OF BLOCK TO BE FILLED WITH MORTAR

CONCRETE TRASH BURNER

NOT TO SCALE

- 1/4" Ø STEEL ROD SET IN MORTAR JOINT
 1/4" Ø STEEL ROD FRAME COVERED WITH 1/4" MESH HARDWARE CLOTH

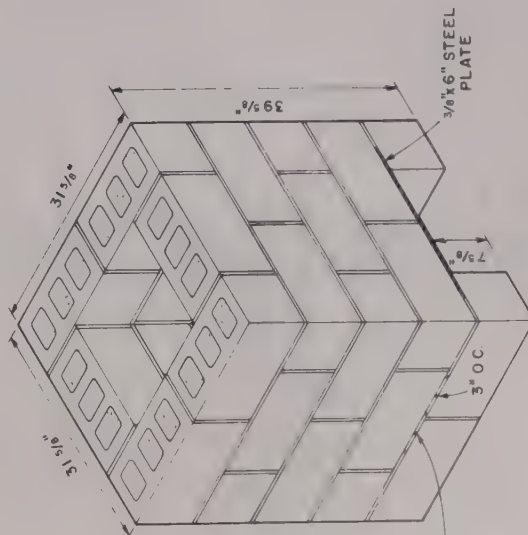


BRICK TRASH BURNER

BILL OF MATERIALS

- FOR BASE:
 1 SACK PORTLAND CEMENT
 2 CU. FT. SAND
 3 CU. FT. GRAVEL
 6 GALLONS WATER
- FOR TRASH BURNER:
 190 COMMON RED BRICK (NEW OR USED)
 1 SACK MASONRY CEMENT
 3 CU. FT. SAND
 1 PC. 3/8"x3" STEEL PLATE 24" LG.
 5 PCS. 3/8" Ø STEEL ROD 24" LG. (GRATE)
 1 PC. 1/4" Ø STEEL ROD 9" LG.
 1 PC. 1/4" MESH HARDWARE CLOTH 24" SQUARE

BLOCK TRASH BURNER



COOPERATIVE EXTENSION WORK IN
 AGRICULTURE AND HOME ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

TRASH BURNERS
 3 TYPES

USDA
 TEXAS

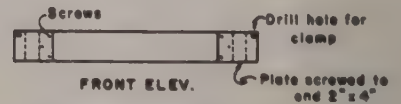
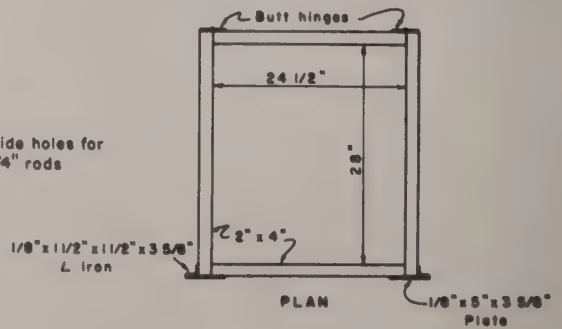
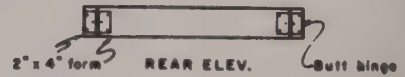
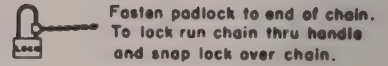
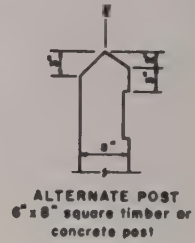
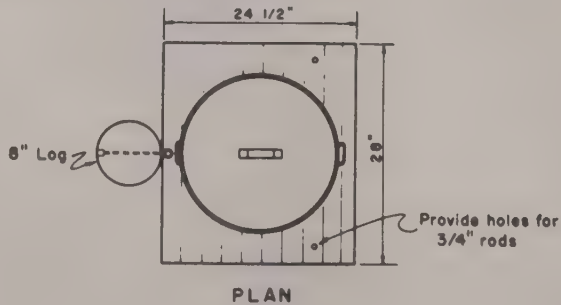
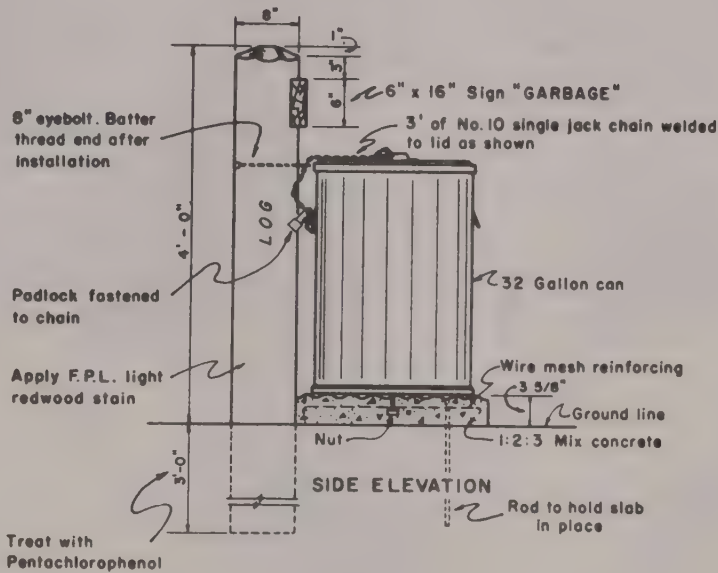
'76

6260

SHEET 1 OF 1

BASED ON USDA PLAN NO 5164
 TEXAS A&M UNIV PLAN NO. 209

GARBAGE CAN MOUNT

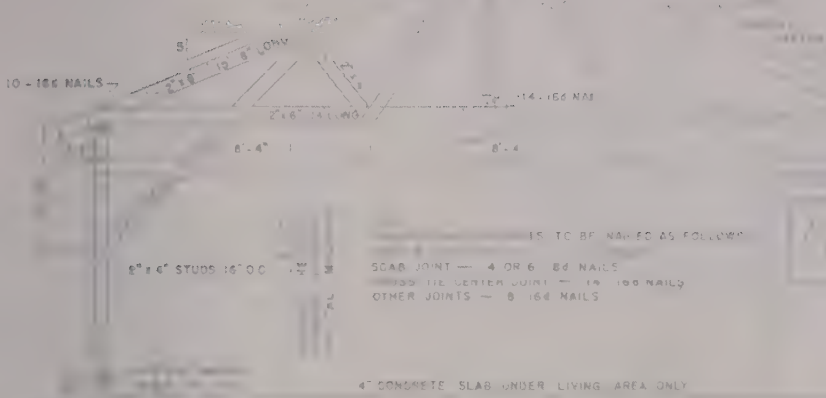


Adapted from drawings reproduced
from USDA Information Bulletin #264.

E. W. Foss
Extension Agricultural
Engineer - April 1964

FORM DETAILS

Forms should be placed on a level surface such as a concrete slab before pouring concrete.



STORAGE SHEDS

AND GARAGES

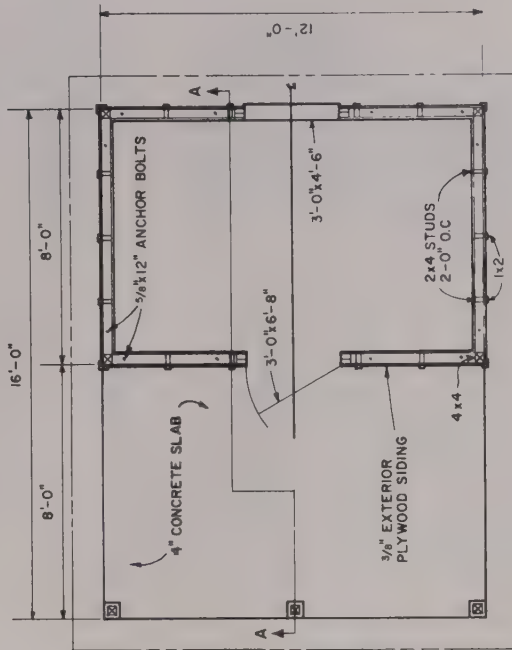
WOOD SHING

ASBESTOS, SHAKES
OR BEVEL SHING

RIGHT END ELEVATION
SCALE — 1/8" = 1'-0"

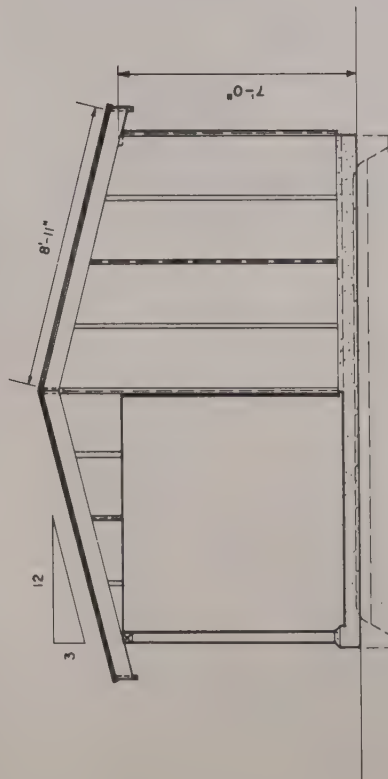
2" x 8" LATH
MINNERS BUTT
OVER POYS

1/2" STRAP BENT FROM

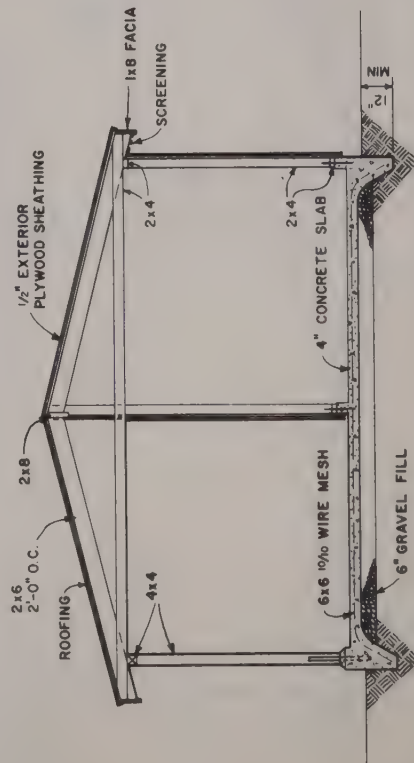


PLAN

TYPE I



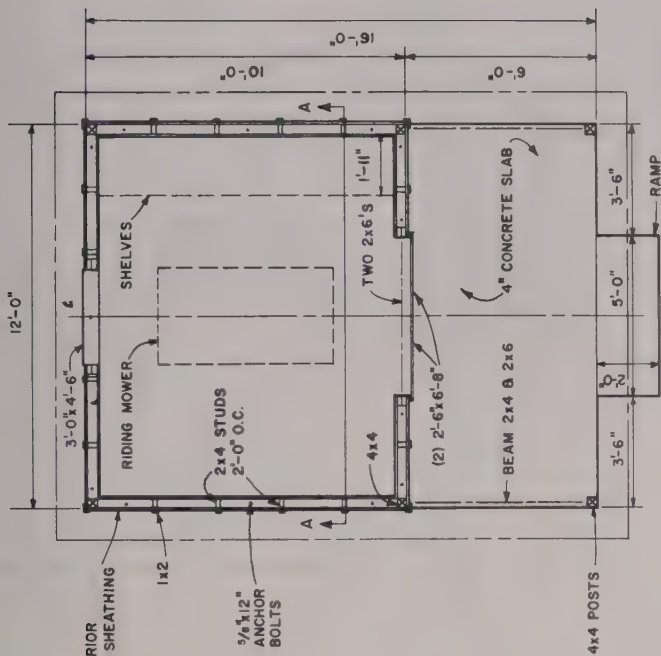
SIDE ELEVATION



SECTION A-A

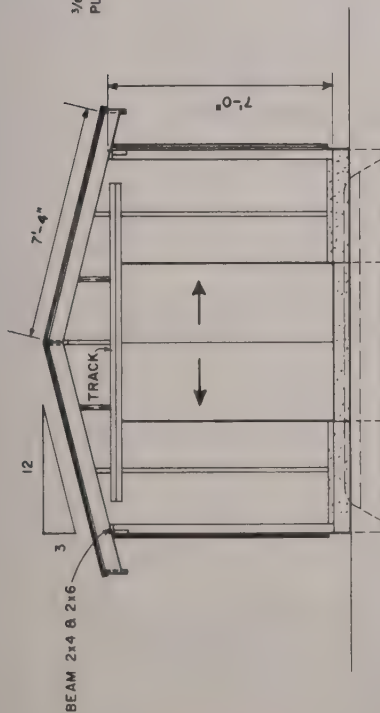
NOTE: ALL 4x4 POSTS TO BE FASTENED WITH 3/6x11/2" STEEL U-STRAP ANCHORS CAST INTO CONCRETE 12" ENDS TO EXTEND 12" ON SIDES OF POST. FASTEN WITH TWO 3/6x12 1/2" LAG SCREWS, STAGGERED, EACH SIDE. FOR OPENINGS UP TO 4'-0" USE TWO 2x4'S FOR OPENINGS UP TO 5'-6" USE TWO 2x6'S

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS			
UNIVERSITY OF FLORIDA AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING			
STORAGE SHEDS			
S.C.	69	6086	SHEET 1 OF 3

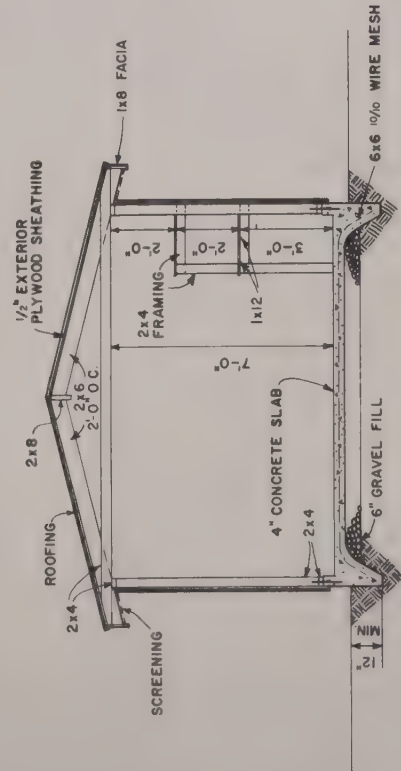


PLAN

TYPE 2

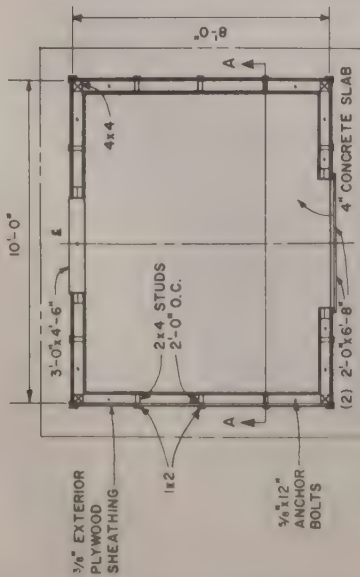


FRONT ELEVATION

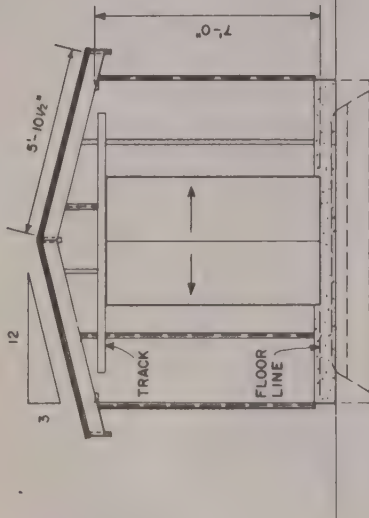


SECTION A-A

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS STATE OF FLORIDA UNIVERSITY OF FLORIDA AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
STORAGE SHEDS		
S. C.	'69	6086
		SHEET 2 OF 3
EXT. AGR. ENGINEER — GAINESVILLE, FLORIDA		

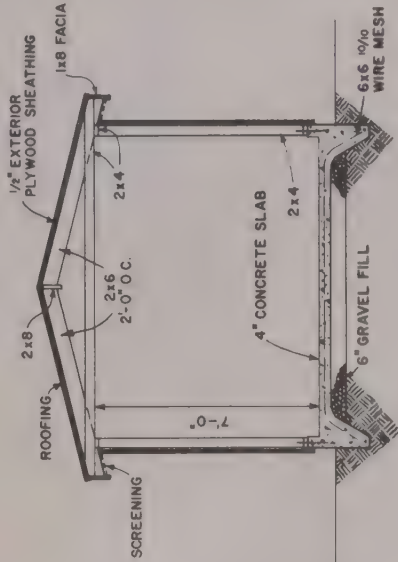


PLAN

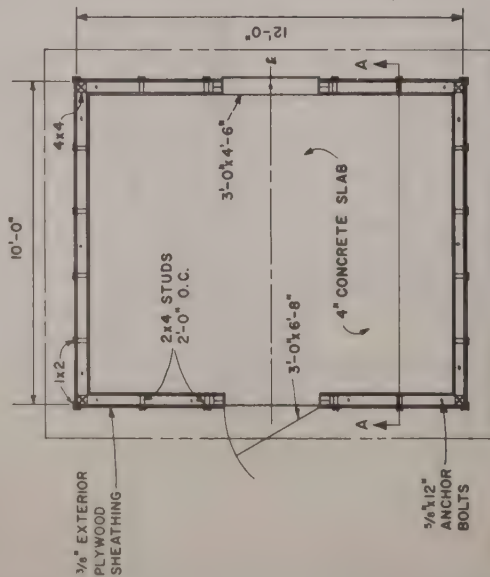


FRONT ELEVATION

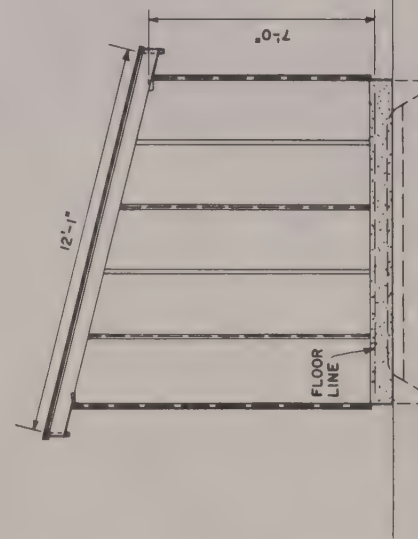
TYPE 3



SECTION A-A

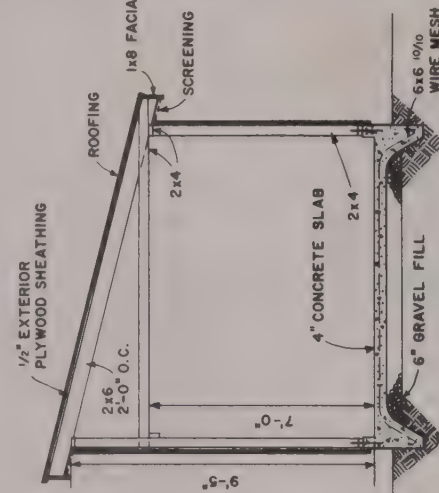


PLAN

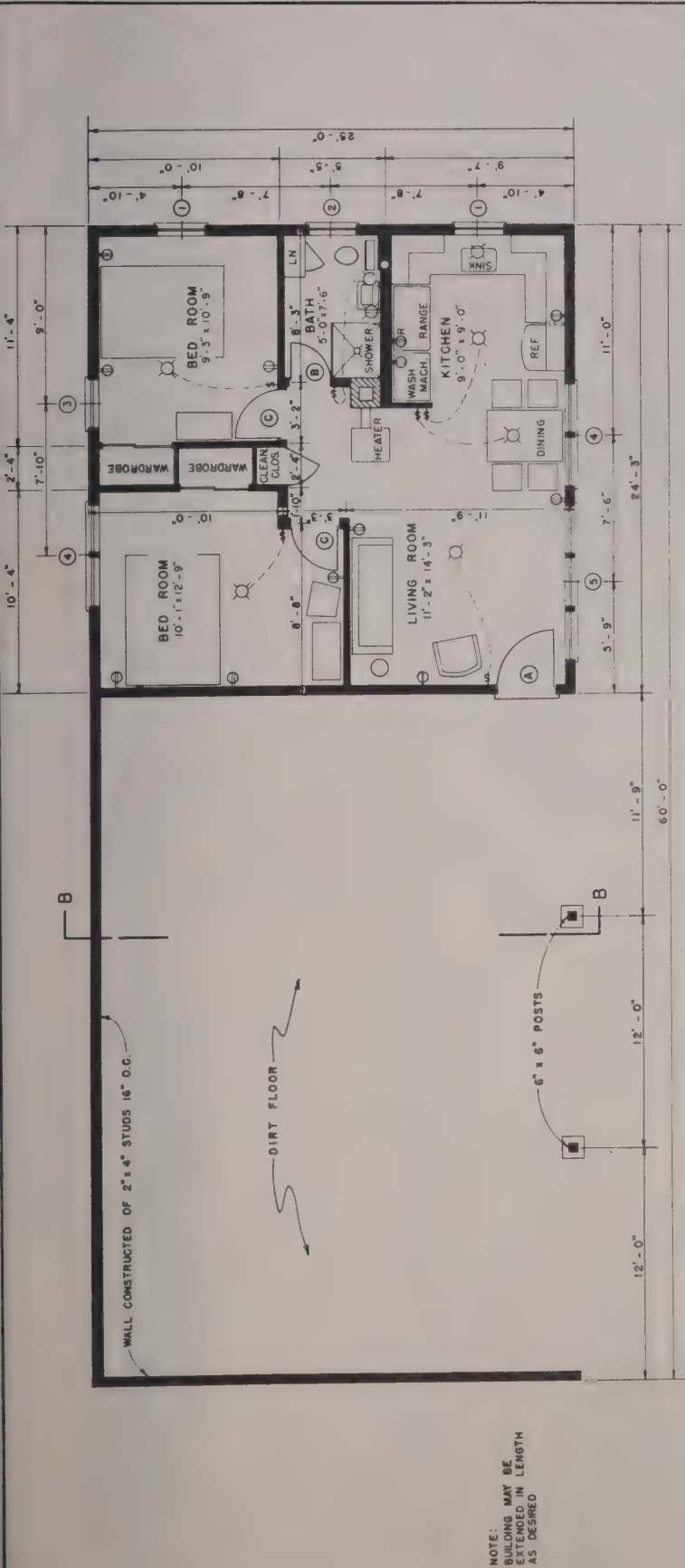


SIDE ELEVATION

TYPE 4



SECTION A-A



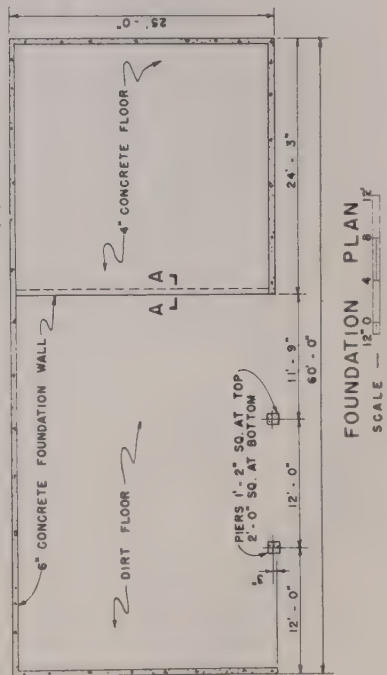
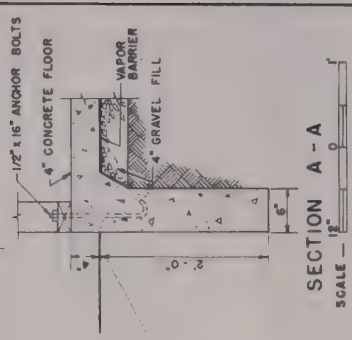
FLOOR PLAN
SCALE — 1" = 4'

WINDOW SCHEDULE		
MARK	SIZE	DESCRIPTION
1	2'-6" x 3'-6" x 1 3/8"	DOUBLE HUNG
2	2'-6" x 2'-10" x 1 3/8"	D. H.
3	2'-6" x 3'-10" x 1 3/8"	D. H.
4	2'-6" x 3'-10" x 1 3/8"	D. H. (2 WINDOWS)
5	2'-6" x 3'-10"	FIXED (3 WINDOWS)

DOOR SCHEDULE		
MARK	SIZE	DESCRIPTION
A	3'-0" x 6'-6" x 1 3/8"	1-LIGHT, EXTERIOR
B	2'-4" x 6'-6" x 1 3/8"	INTERIOR
C	2'-6" x 6'-6" x 1 3/8"	INTERIOR

ELECTRICAL SYMBOLS —

- SWITCH
- DUPLEX CONVENIENCE OUTLET
- Ceiling or Wall Light
- RANGE OUTLET



COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING
MACHINERY SHED WITH LIVING QUARTERS
"AGENCY PLAINS SPECIAL"

ORE '37 EX. 5841 SHEET 1 OF 2

WOOD SHINGLES, METAL, OR COMPOSITION ROOFING

WINDOW HEIGHT - 6'-0" ABOVE FLOOR

FRONT ELEVATION
SCALE - 1/2" = 1'-0"

2" x 8" x 3'-0" SPLICE BLOCK
OVER CENTER POSTS.
USE 1/2" x 1/8" IRON
AT ENDS.

2" x 8" LINTEL
MEMBERS BUTT
OVER POSTS

U-STRAP BENT FROM
4'-0" x 1/2" x 3/16" IRON

ISOMETRIC OF
KNEE BRACE

DETAIL OF LINTEL
SCALE - 1/2" = 1'-0"

RIGHT END ELEVATION
SCALE - 1/2" = 1'-0"

TRUSSED
RAFTERS
2'-2" x 8" LINTEL

2" x 8" x 3'-0" SPLICE BLOCK
OVER POSTS

1/2" x 10" BOLTS

2" x 6" x 1'-10" BLOCK

6" x 6" x 8'-0"

ANCHOR STRAP
BENT FROM
5'-0" x 2" x 3/8" IRON

NOTE:
TRUSSED RAFTER JOINTS TO BE NAILED AS FOLLOWS:-
RAFTER PLATE JOINT - 10 16d NAILS.
SCAB JOINT - 4 OR 6 8d NAILS.
GROSS TIE CENTER JOINT - 14 16d NAILS.
OTHER JOINTS - 8 16d NAILS.

4" CONCRETE SLAB UNDER LIVING AREA ONLY

(4" GRAVEL FILL BENEATH SLAB)

1/2" x 16" ANCHOR
BOLT 6'-0" O.C.

2" x 4" STUDS 16" O.C.

INCREASE HEIGHT IF
STORAGE IS DESIRED
FOR TALL MACHINES.

10 - 16d NAILS

12

9

1-2" x 6" 14" LONG

1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

23'-0"

14 - 16d NAILS

1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

23'-0"

14 - 16d NAILS

1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

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14 - 16d NAILS

1-2" x 4" SCAB

TRUSSED RAFTERS

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8'-4"

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14 - 16d NAILS

1-2" x 4" SCAB

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1-2" x 4" SCAB

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8'-4"

23'-0"

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1-2" x 4" SCAB

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8'-4"

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1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

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1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

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1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

23'-0"

14 - 16d NAILS

1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

23'-0"

14 - 16d NAILS

1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

23'-0"

14 - 16d NAILS

1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

23'-0"

14 - 16d NAILS

1-2" x 4" SCAB

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8'-4"

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1-2" x 4" SCAB

TRUSSED RAFTERS

2'-0" O.C.

8'-4"

23'-0"

14 - 16d NAILS

1-2" x 4" SCAB



2" BLOCKING FOR TRACK

SLIDING DOOR

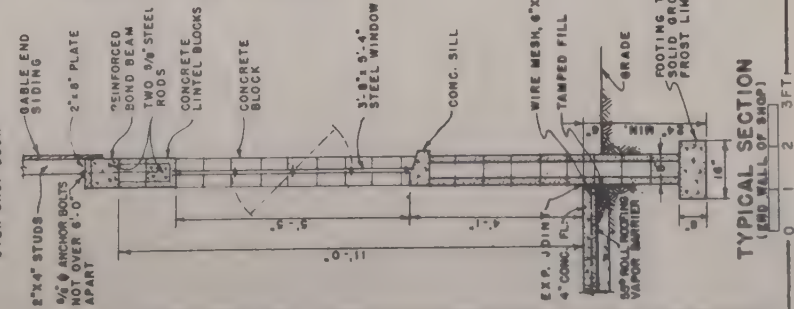
PLATE

LIMIT

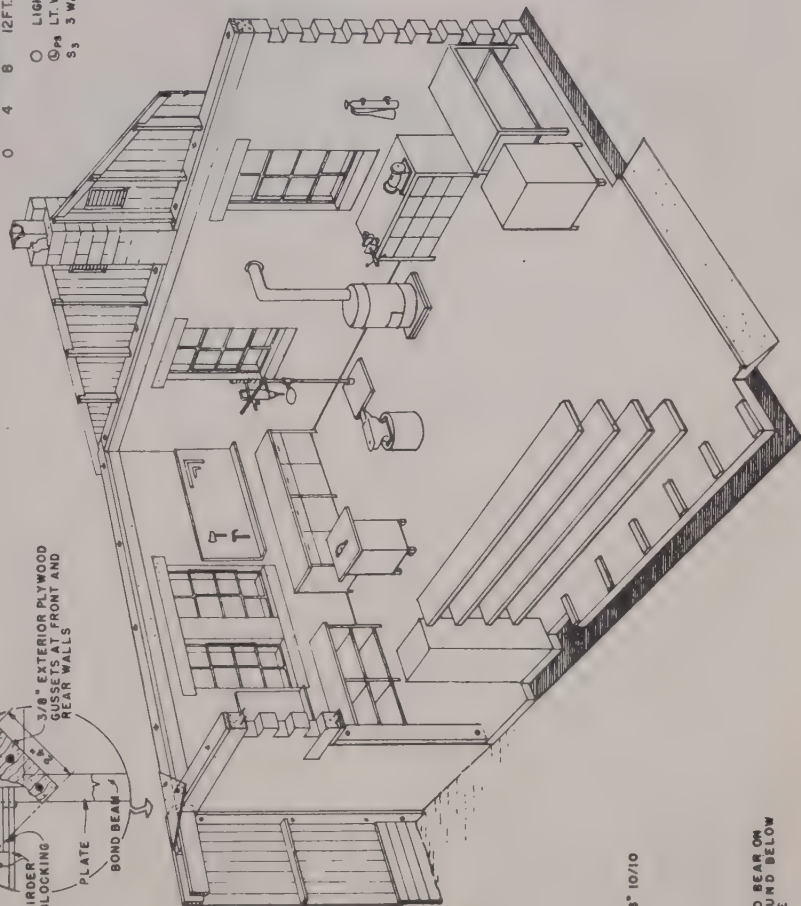
3-2" X 10" X 15.4"



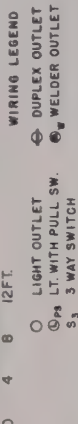
DETAIL AT LINTEL
OVER SHOP DOOR



15
TYPICAL SECTION



A TYPICAL SHOP ARRANGEMENT



WIRING LEGEND
→ DUPLEX OUTLET
○ WELDER OUTLET

LIST OF MATERIALS		UNIT	QUAN.
CONCRETE:			
FOOTING 1'3"5 MIX		CU. YD.	3.8
FLOOR, APRON, BOND BEAM ETC. 1'2"4 MIX		CU. YD.	11.4
BLOCK 8"X8"X16"		EACH	14.6
8"X8"X8"		EACH	83
BLOCK LINTEL 6"X8"X16"		EACH	21
FLUE LINING 6"X8"X24"		EACH	8
MORTAR 1:3 MIX		CU. YD.	1.9
EXPANSION JOINT 1/2"X4"		LN. FT.	106
VAPOR BARRIER-ROOF ROOFING 53 LB.		ROLLS	7
REINFORCING STEEL-WIRE MESH 6"X6" 10/10		SQ. FT.	670
STEEL RODS 5/8"X16'-0"		EACH	11
5/8"X14'-0"		EACH	9
ANCHOR BOLTS 5/8"X24"		EACH	22
STEEL SASH 3'-8"X5'-5" (APPROX.)		EACH	4
METAL LOUVERS		EA. M	2

LIST OF MATERIALS

THIS LIST OF MATERIALS IS PREPARED FOR ESTIMATING PURPOSES.
IF USED FOR THE PURCHASE OF MATERIALS, THE QUANTITIES
SHOULD BE VERIFIED BY THE BUILDER.

(CONTINUED ON SHEET 2)

THIS BUILDING IS INTENDED PRIMARILY FOR USE IN AREAS NOT SUBJECT TO HIGH WINDS OR SNOW LOADS IN EXCESS OF 10 LB. PER SQUARE FOOT. IN AREAS WHERE WINDS OF HURRICANE FORCE (OVER 74 M.P.H.) OR SNOW LOADS UP TO 10 LB. PER SQUARE FOOT MAY BE EXPECTED, USE THE MEMBER SIZES AND FASTENINGS SHOWN IN PARENT THESE (----) AS WELL AS THE OTHER DETAILS FOR HEAVY CONSTRUCTION.

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

MACHINERY STORAGE & SHOP

USDA	'87	EX. 5849	SHEET 1 OF 2
------	-----	----------	--------------

5-10d-1" 24 GA STRAP (12-10d-1 1/2" STRAP)

20d TOE NAILS

3-10d

2" 16" COLLAR TIE

2" 14" (12" 6") TOP CHORD

3-10d

3-10d

2" 4" x 8" BLOCK

2" 1" x 4" TIES, SPACED

2" 1" x 4" SCABS

2" 1" x 4" STRUT

2" 4" (2" 6") BOTTOM CHORD

3-10d

3-10d

1" 4" DIAG. BRACING AT 45° ANGLE

13-8d

2" 3/8" x 4" LAG SCREWS EACH END OF 1/4" x 2" U-STRAP

STANDARD CONSTRUCTION

POLE

TRUSS DETAIL

2 FT.

0

12

CORRUGATED METAL ROOFING ON 1" x 4" NAILING STRIPS SPACED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS

5

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

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10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

1 HEIGHT SHOWN PROVIDES ABOUT 6" FOR VARIATION IN DEPTH OF HOLES AND FOR TRIMMING TOP OF POLES SQUARE AND LEVEL FOR BEAM AFTER POLES ARE SET.

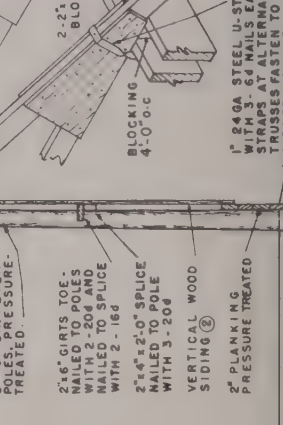
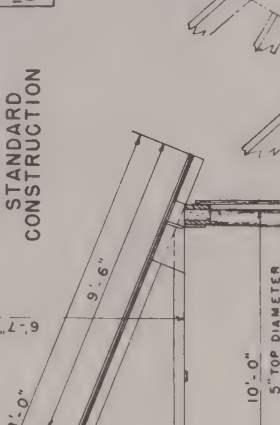
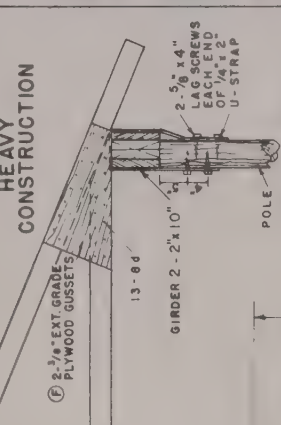
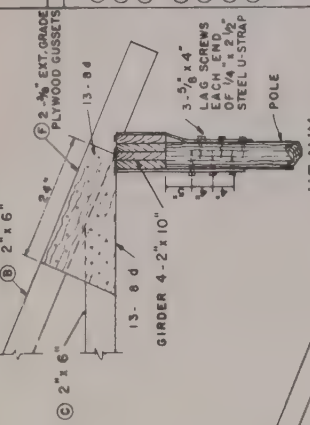
2" TO 4" TAMPED EARTH FILL

CROSS SECTION

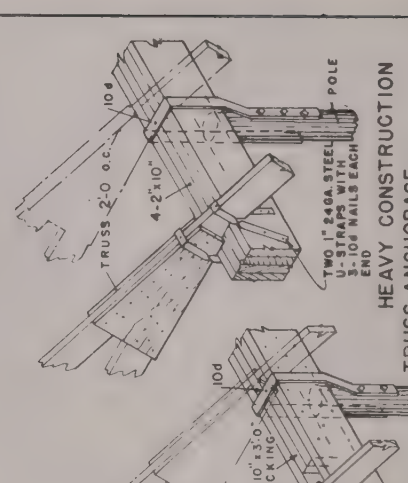
0 1 2 3 4 FT.

0

1



ITEM	STANDARD	SIZE	PCS.	HEAVY	PCS.
TRUSSES (TOTAL 42)					
(A) COLLAR TIE	2" x 6" x 14'-0"	11	2" x 6" x 12'-0"	11	
(B) TOP CHORD	2" x 4" x 18'-0"	84	2" x 6" x 18'-0"	84	
(C) BOTTOM CHORD	2" x 4" x 18'-0"	42	2" x 6" x 18'-0"	42	
(D) STRUT & (E) BLOCK	2" x 4" x 10'-0"	42	2" x 4" x 10'-0"	42	
(F) GUSSET	4'-0" x 8'-0" x 1/2" EXT. 1/2"	11	4'-0" x 8'-0" x 1/2" EXT. 1/2"	11	
(G) TIE & (H) SCAB	1" x 4" x 10'-0"	168	1" x 4" x 10'-0"	168	
(I) SPLICES	1" x 4" x 10'-0"	21	1" x 6" x 10'-0"	21	
DIAGONAL BRACING	1" x 4" x 740 LIN. FT.		1" x 4" x 740 LIN. FT.		
POLES (PRESSURE TREATED)	16'-0" LONG	18	17'-0" LONG	18	
NAILING GIRTS	2" x 4" x 18'-0"	4	2" x 4" x 18'-0"	4	
SPLASH BOARDS TREATED	2" x 6" x 10'-0"	3	2" x 6" x 10'-0"	3	
PLATE	2" x 10" x 12'-0"	17	2" x 10" x 12'-0"	17	
GIRDERS	2" x 6" x 12'-0"	20	2" x 6" x 12'-0"	20	
BLOCKING & FILLERS	2" x 4" x 10'-0"	2	2" x 4" x 10'-0"	2	
SPLICE	2" x 4" x 10'-0"	2	2" x 4" x 10'-0"	2	
GABLE END STUDS	2" x 4" x 10'-0"	2	2" x 4" x 10'-0"	2	
END RAFTERS	2" x 4" x 10'-0"	2	2" x 4" x 10'-0"	2	
DOOR FRAME	2" x 4" x 10'-0"	2	2" x 4" x 10'-0"	2	
SIDING & DOORS: 1842	84 LIN. BOARDS OR 14 S.S. OF MET. SIDING				
ROOF SHEATHING:	3344 OF 1" x 4" WOOD STRIPS: 12 @ 14 FT.				
ROOFING:	LE-53 SQUARES - 86' RIDGE CAP				
HARDWARE:	A. DOOR HANGERS, SLIDING DOOR TRACK 52', 1/2" GUSSET RINGS, GUSSETERS, DOWNSTAYS, NAILS, STRAPS, PAINT AND LAG SCREWS.				



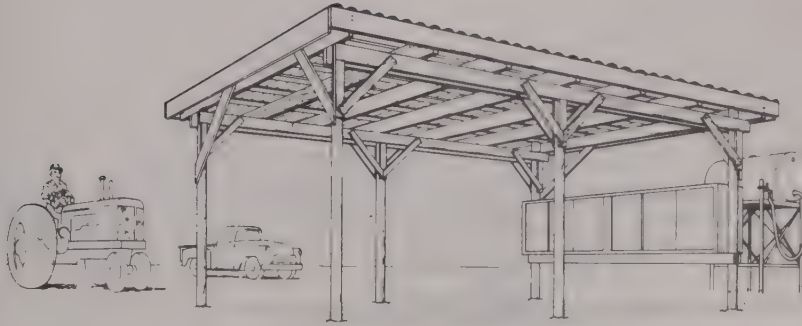
HEAVY CONSTRUCTION TRUSS ANCHORAGE

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING AND

MACHINERY STORAGE & SHOP

USDA '57 EX. 5849 SHEET 2 OF 2

14' x 24' Tractor Port



This is a plan of a pole-type tractor port which can be built near the house and serves as a handy shelter for frequently used tractors and trucks. Storage cabinets can be hung between the poles and used for small tools, oil, grease, etc.

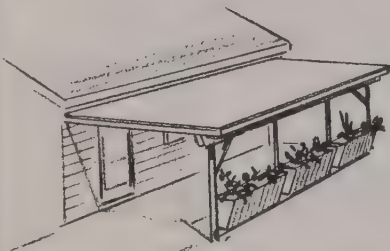
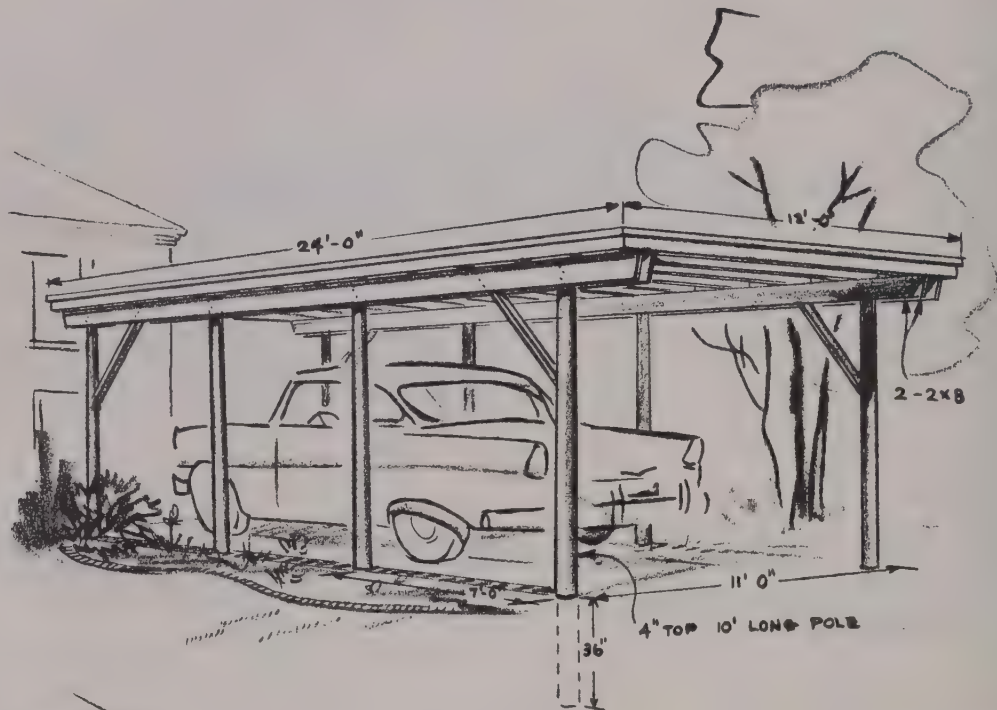
MATERIALS LIST

- * 3 - 16', 4" top penta-treated poles.
- * 3 - 15', 4" top penta-treated poles.
- 8 - 2" x 8" x 12' rafter supports.
- 7 - 2" x 10" x 16' rafters.
- 2 - 1" x 12" x 16' trim sides.
- 4 - 1" x 10" x 14' trim, front & back.
- 4 - 2" x 6" x 12' braces.
- 18 - 2" x 4" x 14' roof purlins.
- 13 - 26" x 9' sheets, 2-1/2" corrugated metal roofing.
- 13 - 26" x 8' sheets, 2-1/2" corrugated metal roofing.
- 5 #, 40d. deformed shank nails.
- 5 #, 20d. deformed shank nails.
- 3 #, 2-1/2" ring shank roofing nails

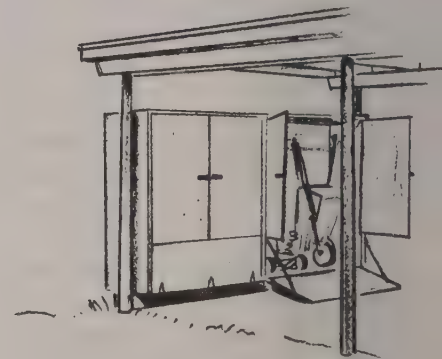
TO ENCLOSE ONE END

- * 1 - 10', 4" top penta-treated pole.
- 1 - 2" x 6" x 14' nailing girt.
- * 3 - 2" x 6" x 14' penta-treated sill boards.
- 36 - 1" x 6" x 12' #3 dressed & matched boards.
- 5 #, 20d. deformed shank nails.
- 10 #, 8d. galv. or aluminum nails.

12' X 24' POLE TYPE SINGLE CARPORT



PLANTERS BETWEEN POLES
CARPORT ATTACHED TO HOME



STORAGE UNITS BETWEEN
END POLES

DAVE SWARTWOUT ASSOCIATES

Homeowners can protect their cars from the sun and rain in summer and from frost and snow in winter with this economical, easy-to-build carport. This 12-foot by 24-foot free-standing single carport can be modified for attachment to the house by resting the joist ends on a 2" x 4" ledger lag screwed to the house studs.

MATERIALS LIST

8 - 10' x 4" tops, pressure-treated poles.

4 - 2" x 8" x 24' beams.

2 - 2" x 4" x 14' braces and ties.

13 - 2" x 6" x 12' roof joists.

100 lin. ft. - 1" x 2" roof trim.

2 - 1" x 6" x 24' fascia.

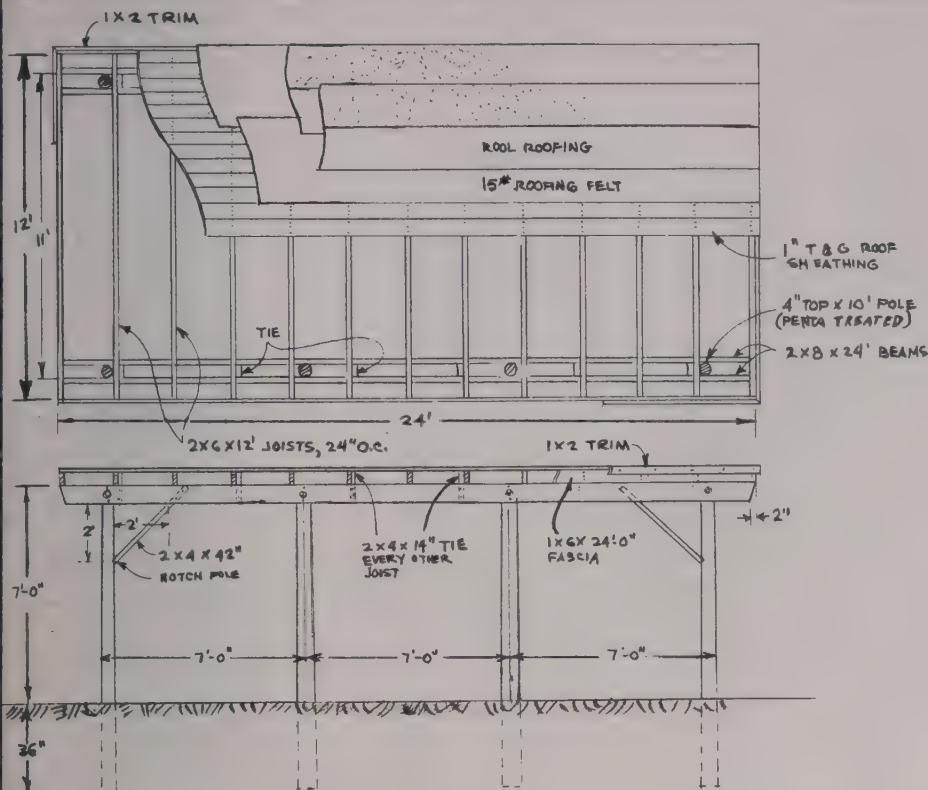
288 sq. ft. - 1" x 6" T & G roof sheathing.

3 sqs. - 15# asphalt felt.

3 sqs. - roll roofing

8 - 1/2" x 9" bolts and nuts.

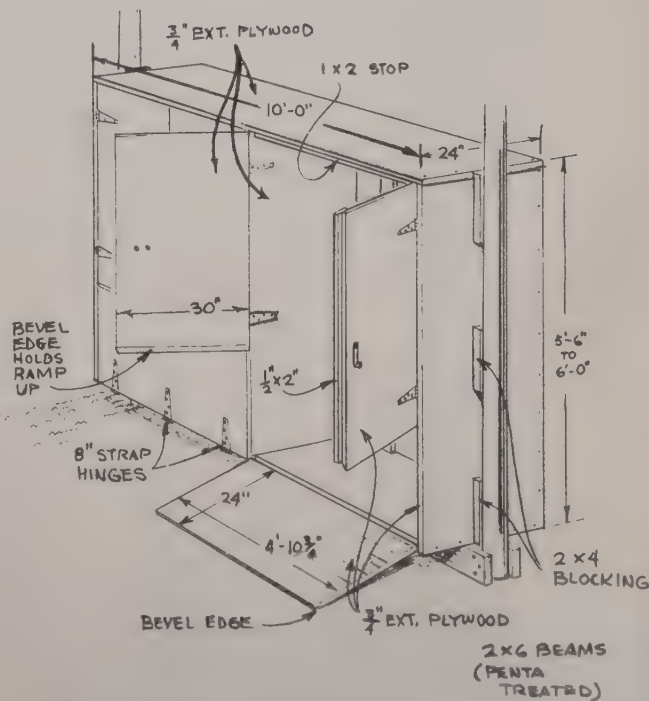
Washers, roofing cement, nails, etc.,
as needed.



SINGLE CAR PORT

CONSTRUCTION STEPS

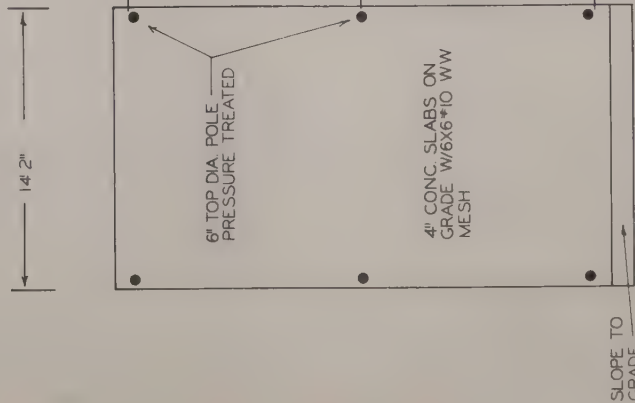
1. Lay out an 11 x 21-foot rectangle on the ground where carport will be situated. Square corners of the area by using a 6 x 8 x 10-foot triangle at the corners.
2. Locate and dig the holes 3-feet deep for the penta-treated poles.
3. Pick the four straightest poles for the corner holes. Backfill just enough to keep poles upright. Check the distance between them and temporarily brace them with sheathing boards nailed diagonally between each pair of end poles.
4. Locate and nail the two outside 2" x 8" x 24' beams to the poles. Use ring-shanked nails for better gripping power in the poles.
5. Put in other four poles and nail the beams to them. Add the 2" x 6" x 12' roof joists over the end poles and square and plumb the entire structure. Use sheathing material for temporary braces.
6. Add the inside beams and short diagonal braces. Notch the lower ends of the braces into the poles. Drill beams and poles for one-half inch bolts, one at each joint.
7. Add the rest of the joists, toe nailing to the beams. Add short tie pieces at every other joist.
8. Nail the fascia and sheathing in place. Also nail up the 1" x 2" trim to cover the edge of the sheathing.
9. Cover the sheathing with a layer of 15# asphalt felt followed by roll roofing set in roofing cement.
10. For the storage unit, add two 2" x 6" penta-treated beams between the poles. Build the unit from 3/4-inch exterior plywood.
11. The flower boxes are also built on a 2" x 6" penta-treated beam between poles. Make the ends from 1" x 12" lumber and the sides from grooved exterior plywood.



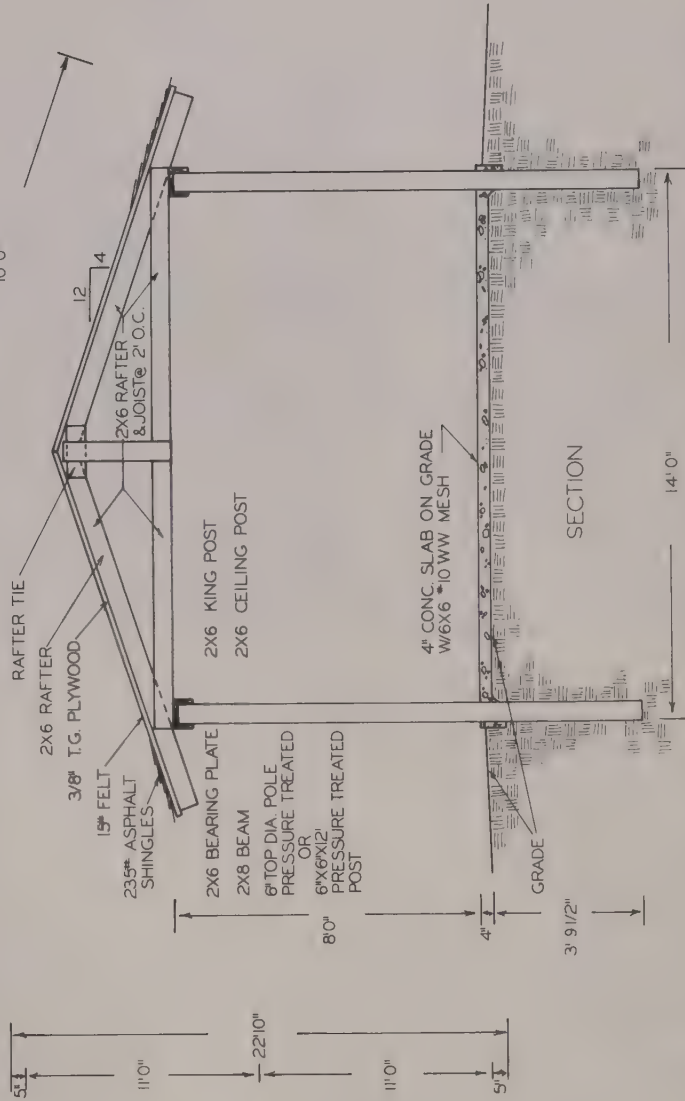
STORAGE UNIT FOR CARPORT

BILL OF MATERIALS

ITEM	DESCRIPTION	QUANTITY	REMARKS	ITEM	DESCRIPTION	QUANTITY	REMARKS
SHINGLES	23# ASPHALT	5 SQ.		BEAMS	2"x8"x12'0"	8	
FELT	15# FELT	480 SQ. FT.		POLE OR POST	6" TOP DIA X12'0"	6	PRESSURE TREATED
SHEATHING	5/8" T.G. MARINE PLYWOOD	15 SHEETS		CONCRETE	2500*	4 CU. YDS	"
KINGPOST	2"x6"x12'0"	4	CUT TO 2'10" LENGTHS	WELD WIRE FABRIC	6X6 - 10/10	325 SQ. FT.	
RAFTER TIE	2"x6"x8'0"	2	CUT TO 1'4" LENGTHS				
RAFTER	2"x6"x10'0"	26					
CEIL. JOIST	2"x6"x14'0"	13					
BEARING PLATE	2"x6"x12'0"	4					



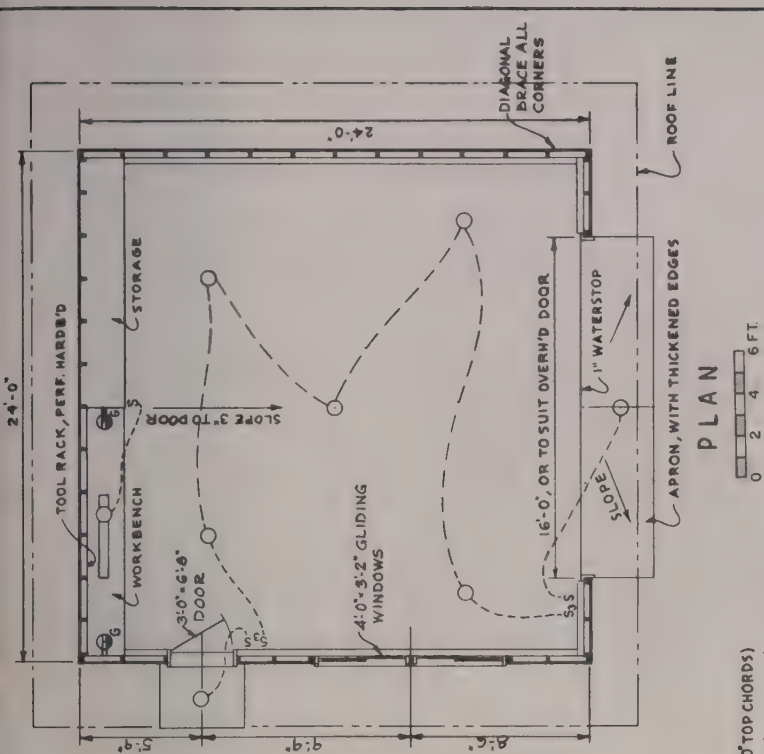
PLAN OF CARPORT



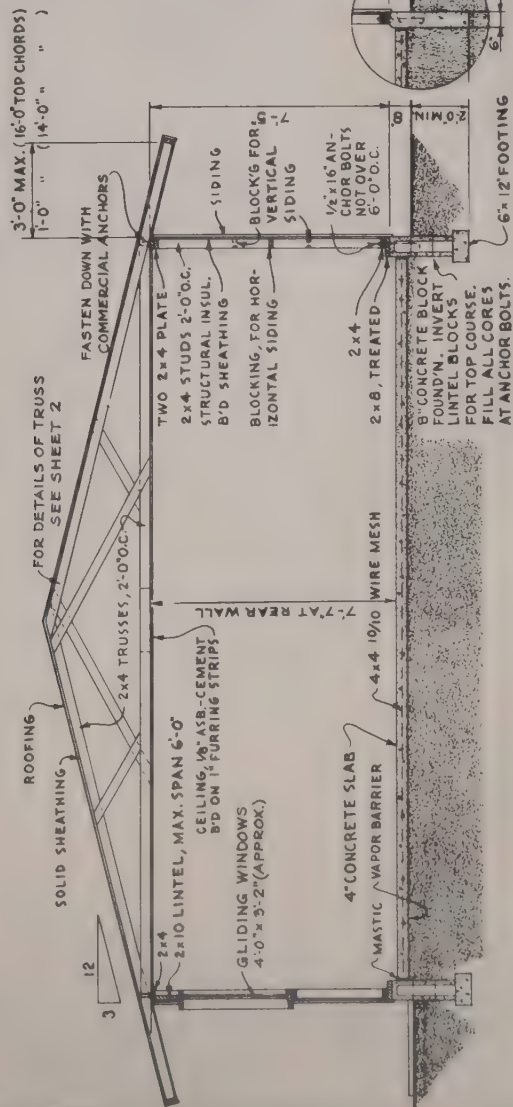
SECTION

Cooperative Extension Work in Agriculture & Home Economics
State of South Carolina-Clemson University & USDA Cooperating

SCALE	APPROVED BY:	Des. by:	DRAWN BY:
DATE	MARCH 1976	F.H.H.	F.H.H.
POLE CARPORT		REVIEWED	Y.T.R.
DRAWING NUMBER		4599	

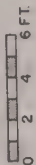


PERSPECTIVE

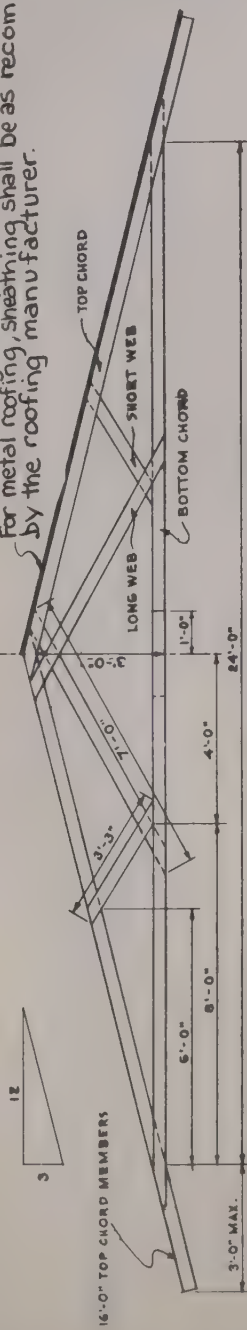


SECTION

PLAN



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS DEPARTMENT OF AGRICULTURAL ENGINEERING UNIVERSITY OF MARYLAND	
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING	
TWO-CAR GARAGE FRAME CONSTRUCTION	
USDA '61	EX-5929 SHEET 1 OF 2



ELEVATION



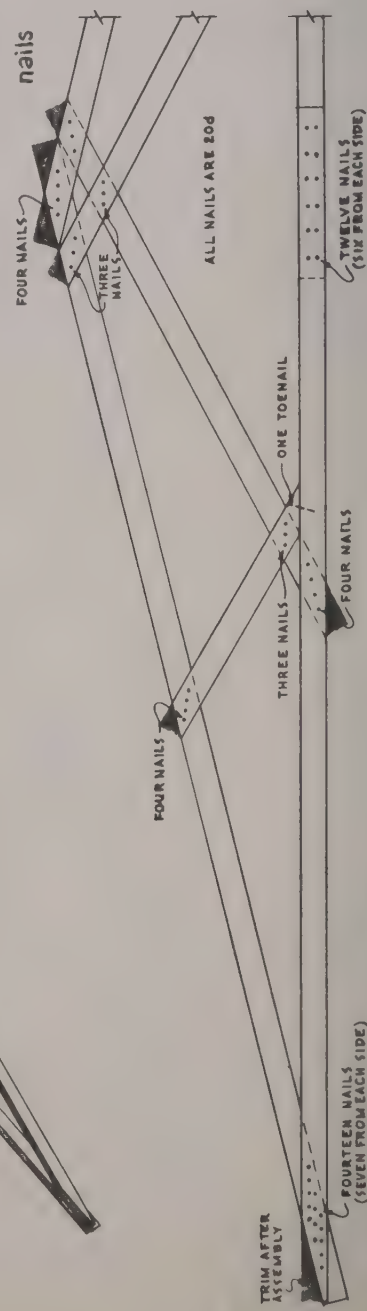
0 1 2 3 FT.

All projecting nails are to be clinched.

Trusses should be securely anchored to the supporting structure.

Materials for one truss:

top chord	2 pcs	2" x 4" x 16'-0"
bottom chord	2	2" x 4" x 14'-0"
long webs	1 ps	2" x 4" x 14'-0"
short webs	1	2" x 4" x 6'-0"
nails	2 1/2 lbs.	20d common

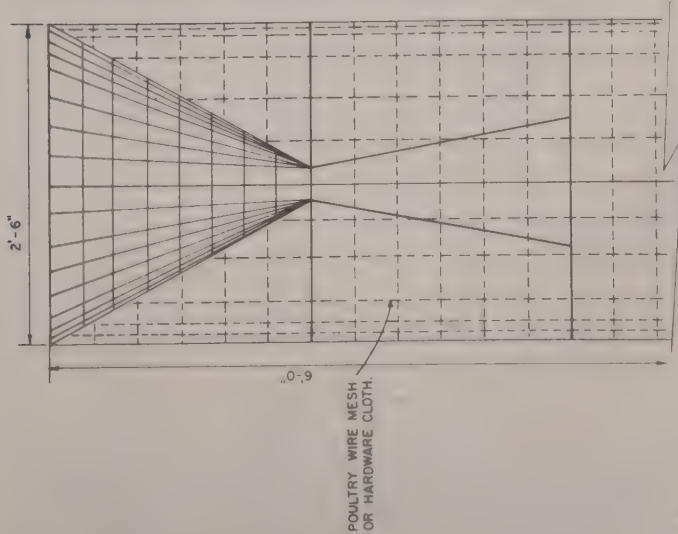
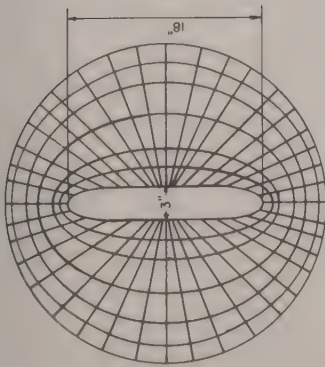


JOINT DETAILS

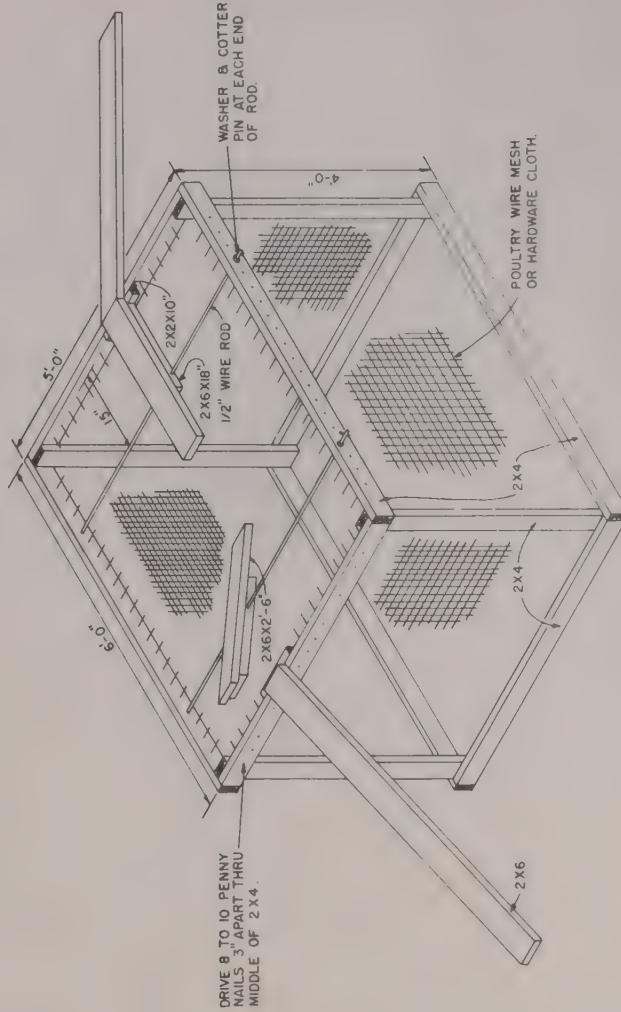
CUTTING DIAGRAM FOR SHORT WEBS

HOUSES FOR PETS AND BIRDS

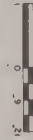
PERSPECTIVE OF SINGLE
HUTCHES WITH 2x2 LEGS



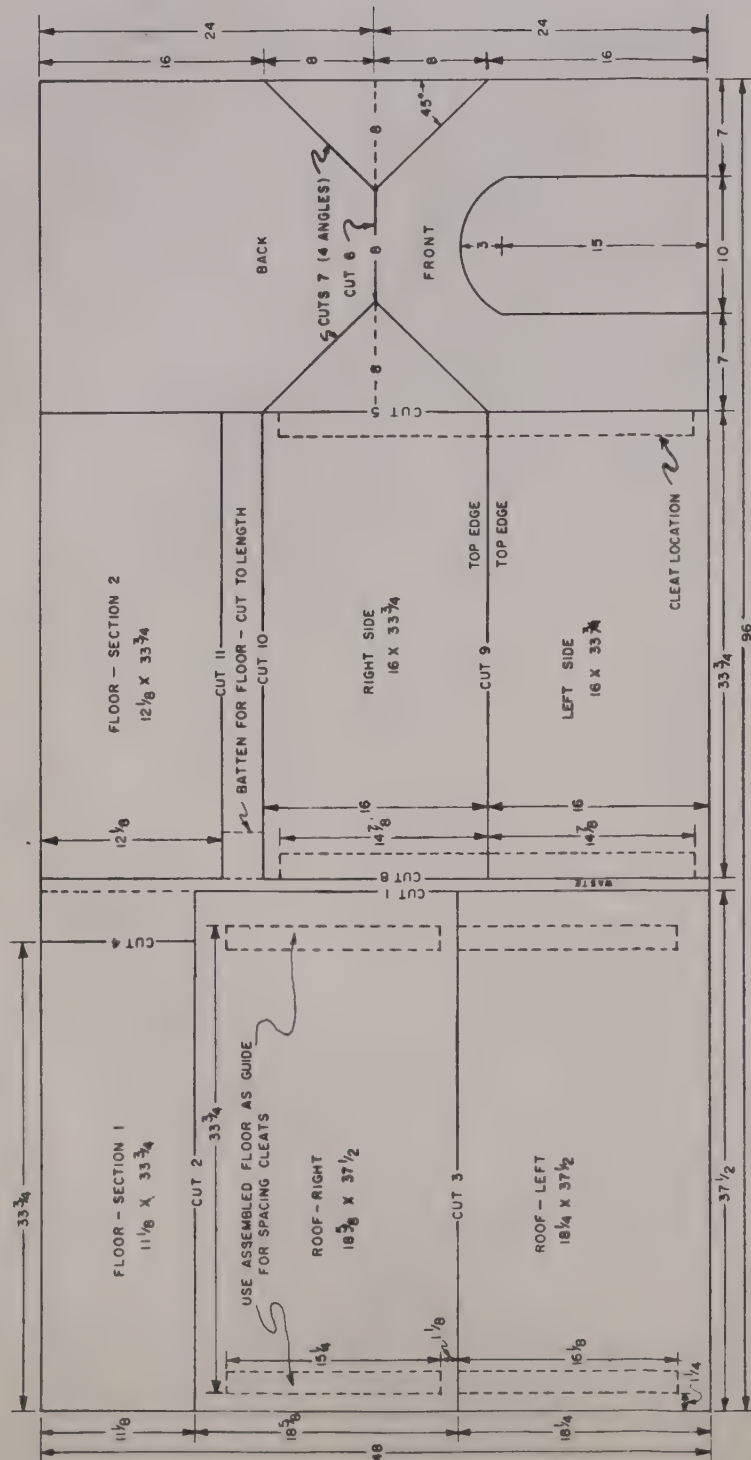
NARROW-MOUTHED FUNNEL TRAP



TURTLE BOX TRAP



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS			
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATIVE			
TURTLE TRAPS			
ALA.	'75	6213	SHEET 1 OF 1



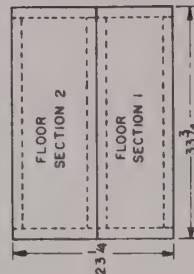
PLYWOOD CUTTING DIAGRAM

MATERIALS

- 1 SHEET 4' X 8' X 3/8" EXTERIOR PLYWOOD
- 18 LIN. FT. 1" X 2" FURRING STRIPS FOR NAILING CLEFTS
- 1/2 LB. 24 (1" LONG) COMMON FINE GALVANIZED NAILS OR 24 COMMON ALUMINUM NAILS

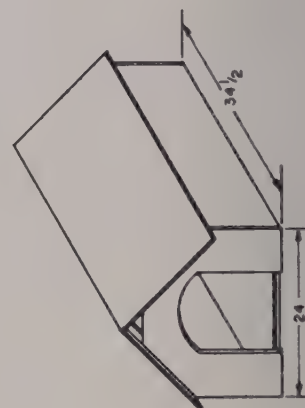
NOTES

- 1 MAKE CUTS AS NUMBERED BEFORE LAYOUT OF NEXT SECTION
- 2 SAW KERF FOR CUTS 2 & 3 WILL REDUCE DIMENSIONS OF ROOF SLIGHTLY
- 3 MARK ALL PIECES FOR IDENTIFICATION
- 4 ASSEMBLE FLOOR WITH CLEFTS AND BATTEN AS SHOWN
- 5 ATTACH NAILING CLEFTS TO ROOF AND SIDE SECTIONS
- 6 ATTACH SIDES TO FLOOR WITH CLEFTS ON THE INSIDE
- 7 ATTACH ROOF SECTIONS WITH CLEFTS ON THE INSIDE
- 8 3/4" THICK FOAM INSULATION BOARD MAY BE ATTACHED BETWEEN CLEFTS ON SIDES AND ROOF FOR COMFORT. THIS SHOULD BE PUT IN PLACE BEFORE ROOF SECTIONS ARE ATTACHED AND COVERED WITH 1/8" THICK TEMPERED HARD BOARD
- 9 FASTEN A PIECE OF CARPET OR CANVAS OVER ENTRANCE DURING WINTER
- 10 DOGHOUSE CAN BE PAINTED OR LEFT NATURAL



ASSEMBLED FLOOR

USE 1X2 CLEFTS & BATTEN



PERSPECTIVE

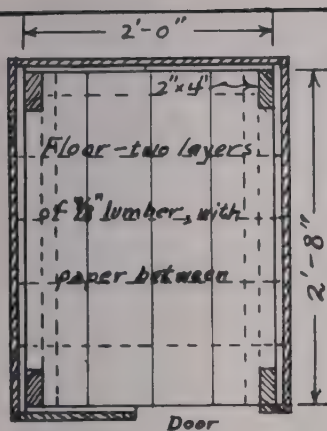
ALL DIMENSIONS IN INCHES

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY OF CONNECTICUT
STORRS, CONNECTICUT

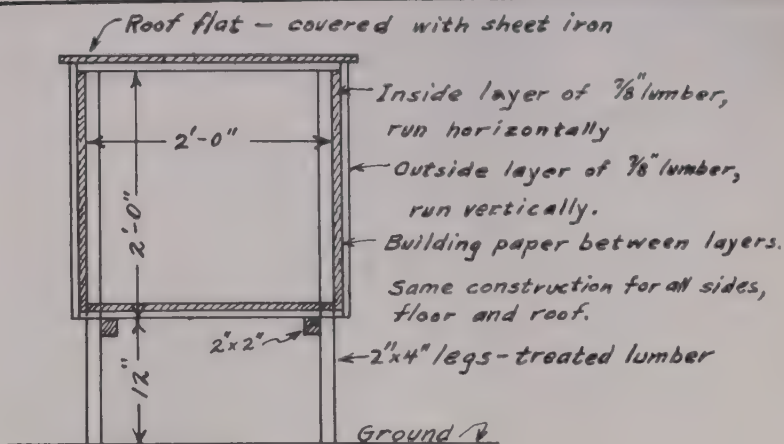
U. S. DEPARTMENT OF AGRICULTURE COOPERATING

PLYWOOD DOGHOUSE

DR. BY W.C.W. CK. BY J.W.B. SHEET 1 OF 1

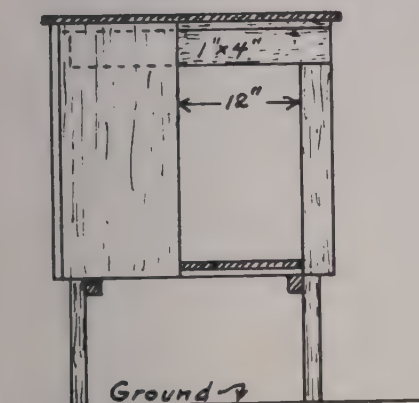


FLOOR PLAN

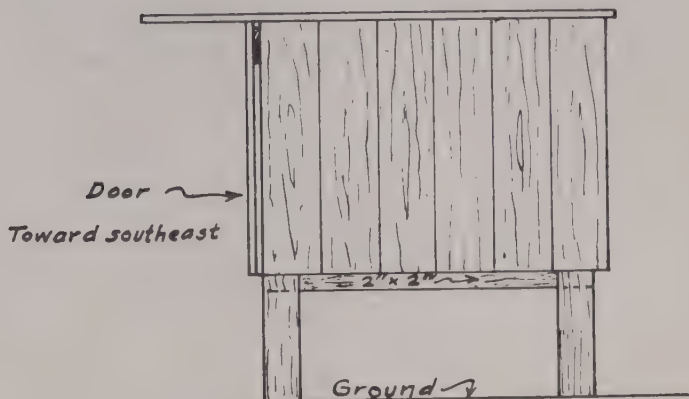


SECTION

Top may be made removable, if desired.



FRONT



SIDE VIEW

THREE STORY DOG HOUSE. Dog may get in the house, under it, or on the roof.
 Size of house, according to size of dog.
 The sides of the house may be made of one layer of $\frac{3}{8}$ " weather-proof plywood.
 The roof may be one piece of weather-proof plywood, stiffened with cleats.
 Sheet iron may be omitted from a plywood roof, if plywood is kept painted.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND
HOME ECONOMICS

THE TEXAS A. & M. COLLEGE SYSTEM AND U. S.
DEPARTMENT OF AGRICULTURE COOPERATING

G.G. GIBSON, DIRECTOR, COLLEGE STATION, TEXAS

DOG HOUSE

DRAWN BY: M. R. B.

SCALE AS SHOWN

TRACED BY: M. R. B.

SHEET 1 OF 1

REV. JUNE, 1954

SERIAL NO. 315

MATERIAL: 3/8" OR 1/2" EXTERIOR GRADE PLYWOOD.

NOTE:

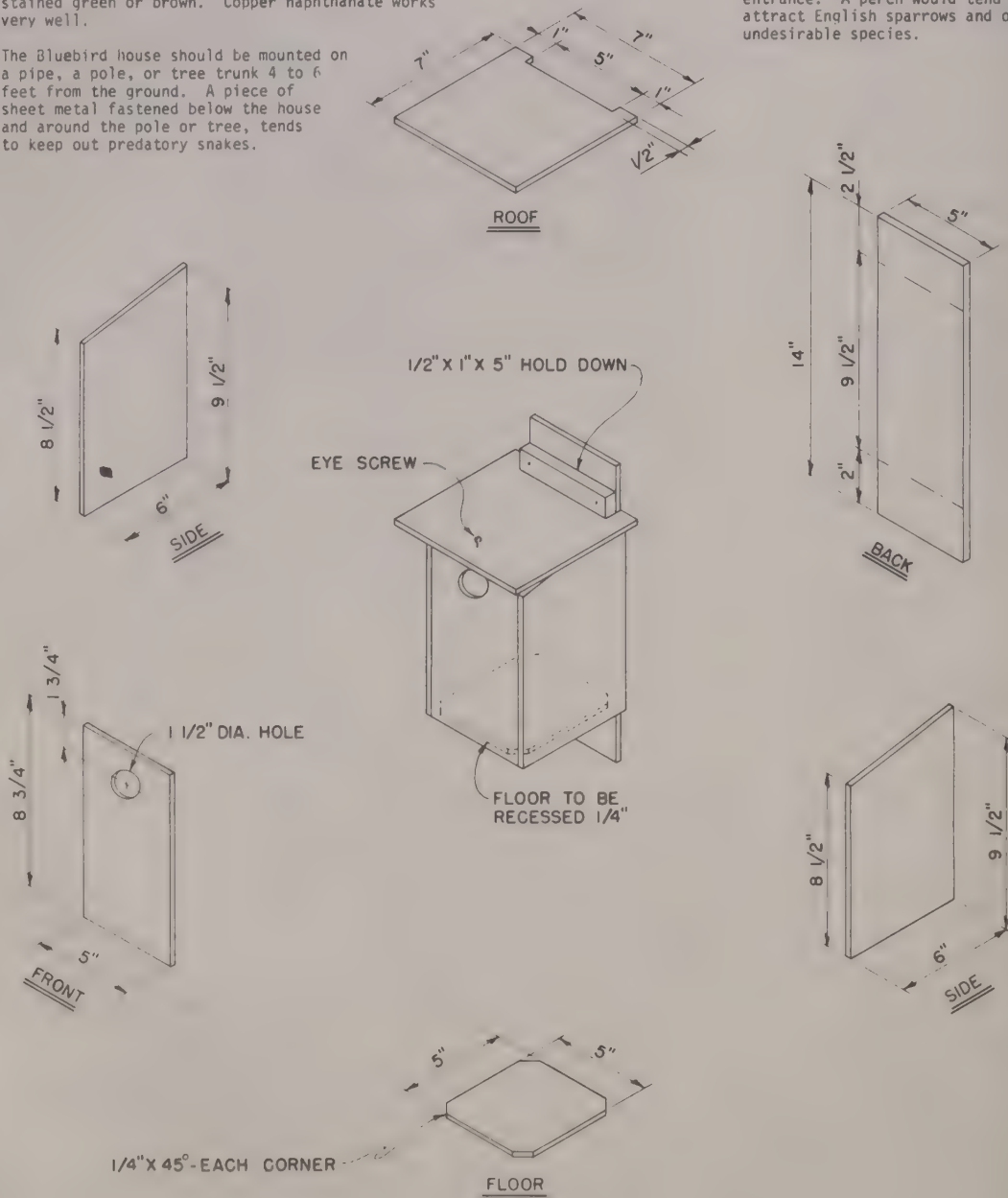
ROOF TO BE ATTACHED WITH EYE SCREW.

Assemble the bluebird house with coated box nails or screws. Wood used in construction should be stained green or brown. Copper naphthanate works very well.

The Bluebird house should be mounted on a pipe, a pole, or tree trunk 4 to 6 feet from the ground. A piece of sheet metal fastened below the house and around the pole or tree, tends to keep out predatory snakes.

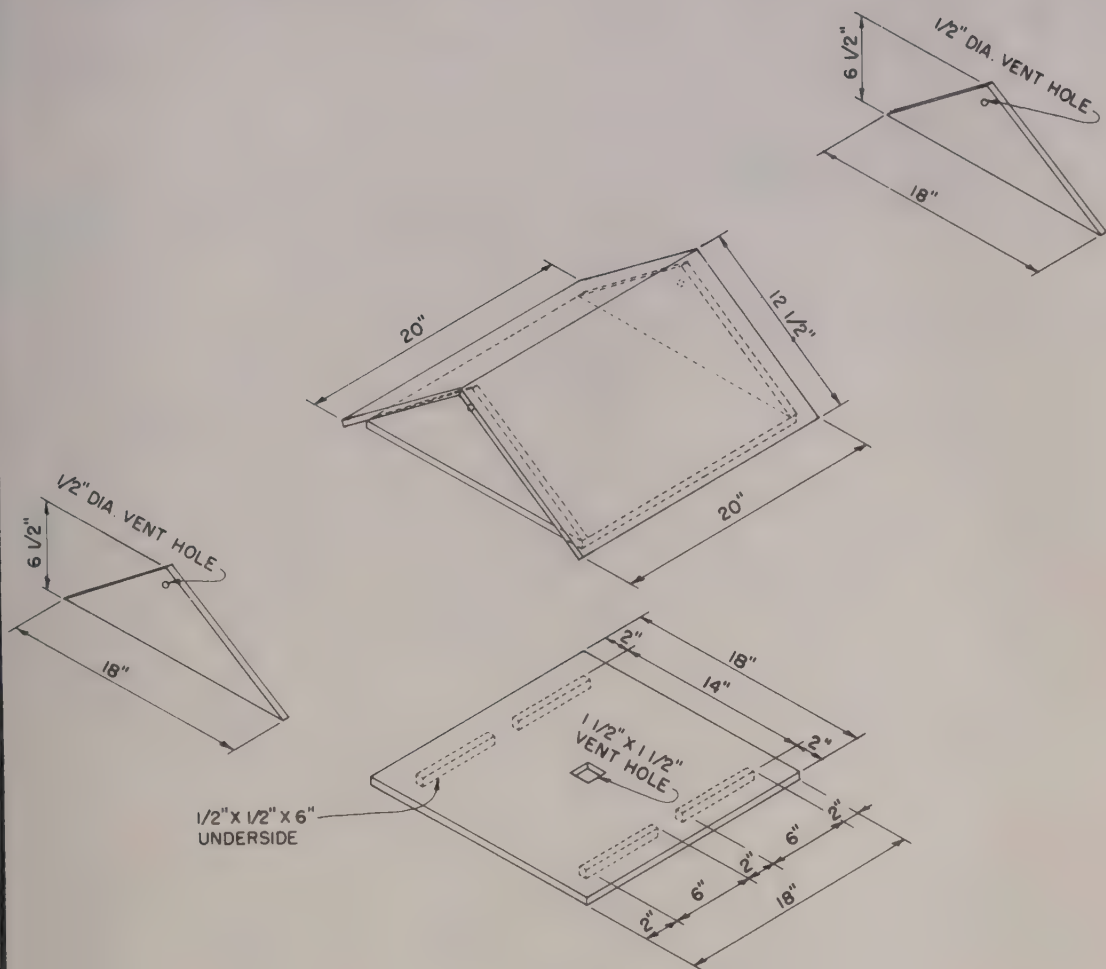
Bluebirds like open areas away from trees, such as pastures, meadows, and large lawns. Bluebirds seem to prefer houses that open toward the south, and if utility lines or a wire fence is nearby, so much the better. Houses should be placed to have some afternoon shade to reduce the danger of overheating. Space houses 200 feet, or more, apart.

Bluebirds do not need a perch by the entrance. A perch would tend to attract English sparrows and other undesirable species.

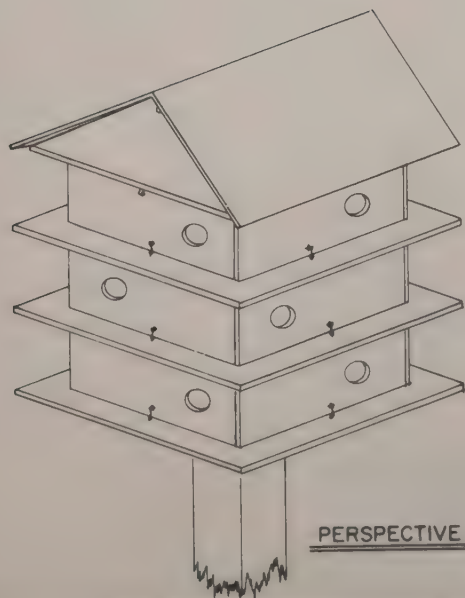


DUNCAN BLUEBIRD HOUSE

MATERIAL: 1/2" EXTERIOR GRADE PLYWOOD.



ROOF



PERSPECTIVE

NOTE:

FOR CLEAN OUT PURPOSES, USE
HOOKS AND EYES TO ATTACH
FLOORS, WALLS, AND ROOF, AS
SHOWN IN "PERSPECTIVE."

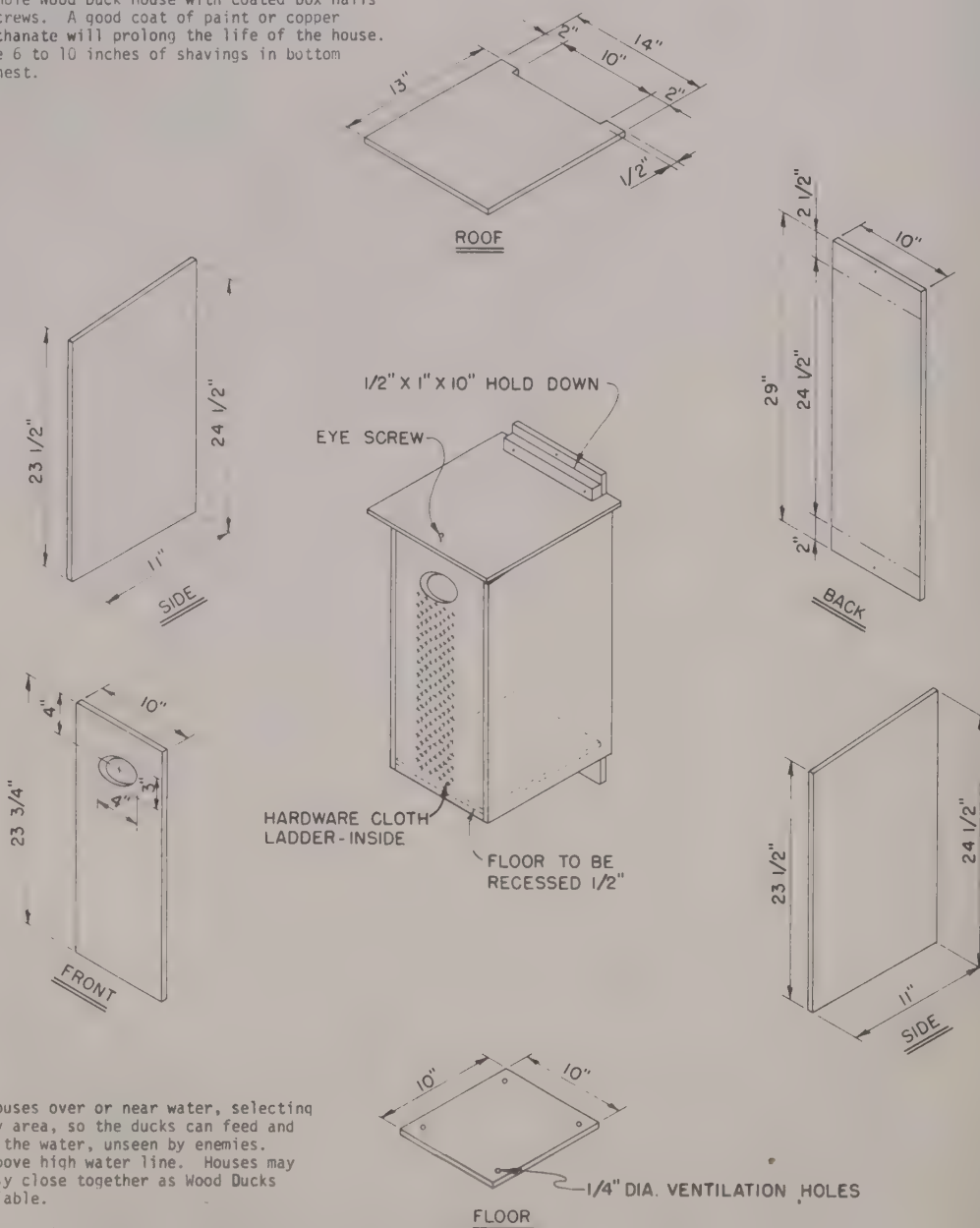
PURPLE MARTIN BIRDHOUSE

MATERIAL: 3/8" OR 1/2" EXTERIOR GRADE PLYWOOD.

NOTE:

ROOF TO BE ATTACHED WITH EYE SCREW.

Assemble Wood Duck House with coated box nails or screws. A good coat of paint or copper naphthanate will prolong the life of the house. Place 6 to 10 inches of shavings in bottom for nest.



Place houses over or near water, selecting a swampy area, so the ducks can feed and rest on the water, unseen by enemies. Place above high water line. Houses may be fairly close together as Wood Ducks are sociable.

If the house is placed on a pipe, the pipe can be greased with axle grease, water pump grease, or any durable grease. If the house is placed on a pole, a piece of sheet metal fastened below the house and around the pole will keep raccoons from getting to the ducks' eggs.

Do not place houses in a straight line. Do not place houses so that limbs or tree branches droop in front of the entrance. Do not place the entrance within jumping distance of raccoons or squirrels.

WOOD DUCK HOUSE

Wren House

MATERIALS:

1 piece 1" x 6" x 24" (actual size about 3/4" x 5 1/2")

1 piece 1" x 4" x 12" (actual size about 3/4" x 3 1/2" x 12")

Use box lumber, bevel siding, exterior plywood, heavy asphalt roofing or tin for roof

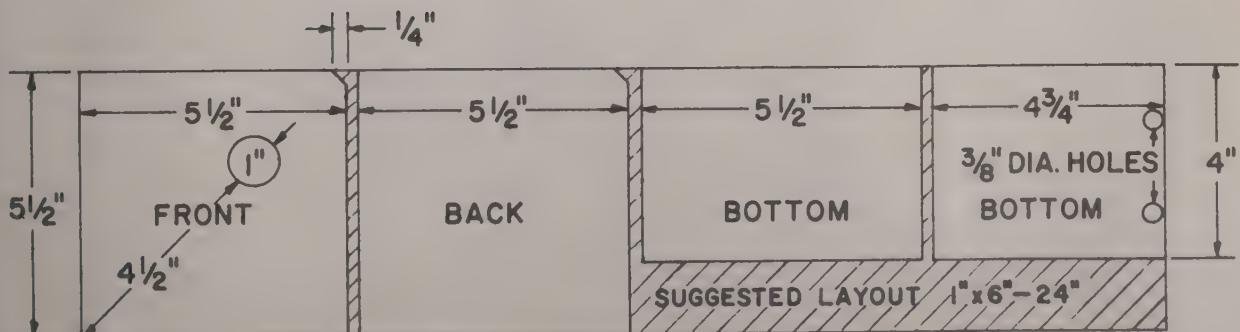
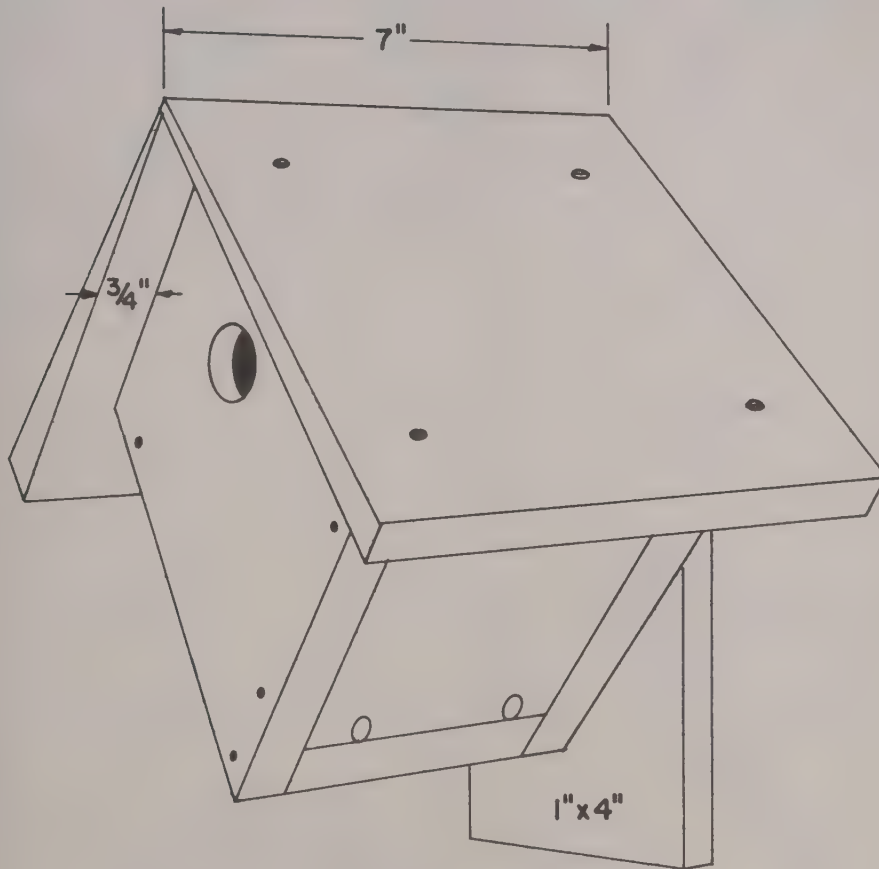
4 - roundhead wood screws to attach one side of roof

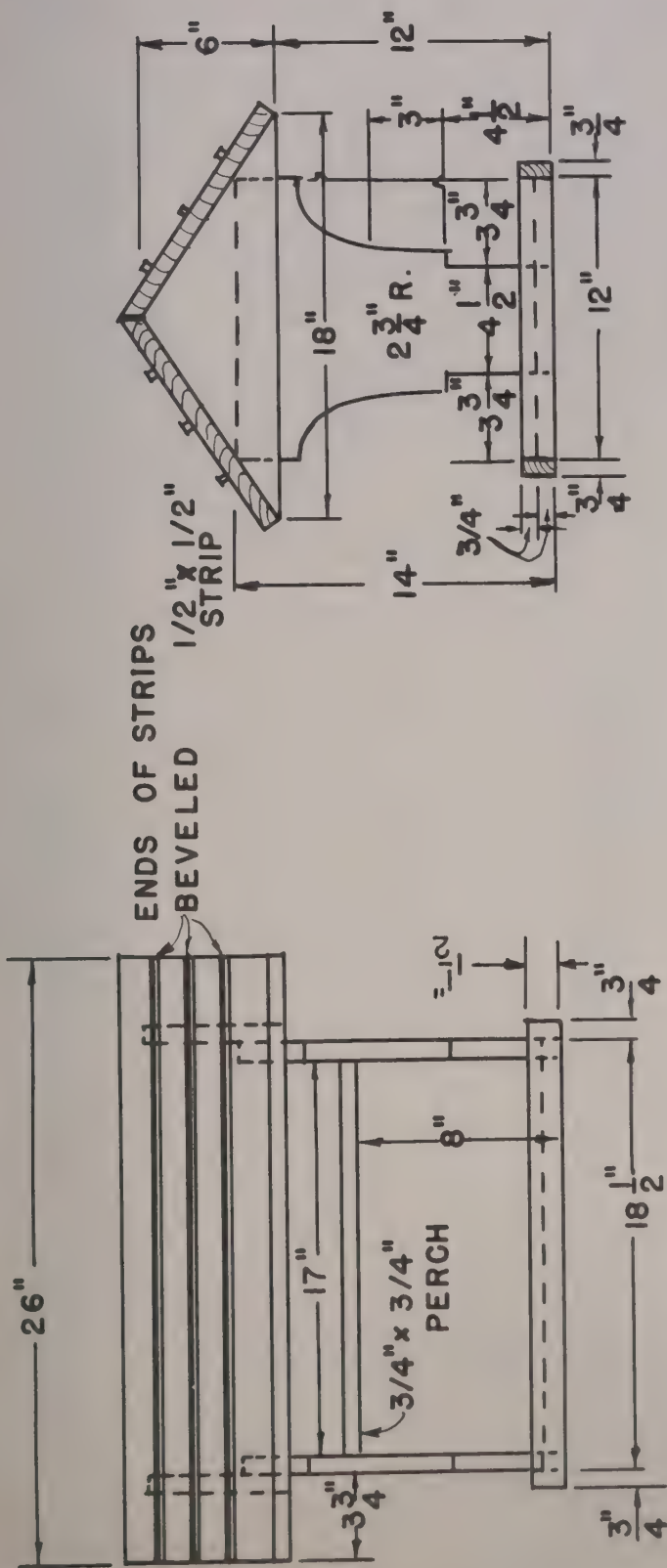
9 - 2" nails

8 - 1 1/2" nails

Water repellent wood preservative or penetrating exterior stain for finish

NOTE: Attach one side of roof with wood screws, so it can be removed for annual house cleaning.



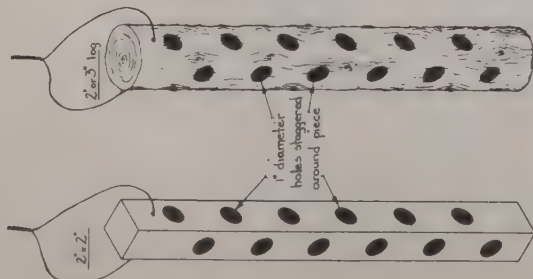


SIDE

FRONT

NOTE: PLACE FEEDER ON TOP
OF POST 4'-6" ABOVE
GROUND.

BIRD FEEDER

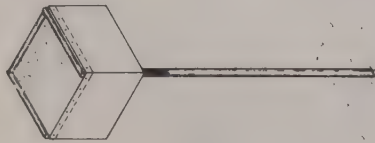


MIXED FEED or SUET FEEDER

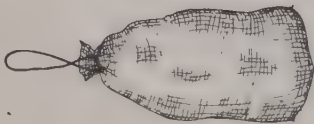
OPEN FEEDER

1. Place in open area where squirrels cannot jump onto feeder.
2. Support from ground with metal pipe & floor flange.
3. Fasten galvanized sheet metal 1'-0" wide to 1 1/2" x 12" base (approx).

- all 4 sides. Use dowels for perch.

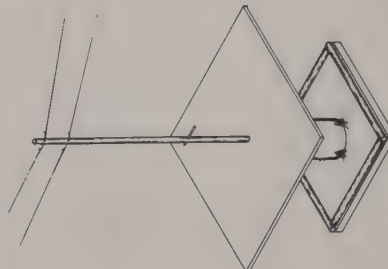


ORANGE or ONION BAG
SUET FEEDER



AGRICULTURAL ENGINEERING DEPARTMENT UNIVERSITY OF CONNECTICUT	
BIRD FEEDERS	SHEET 1 OF 1
DR BY RBL	PLAN # 609
DATE 3-1-64	

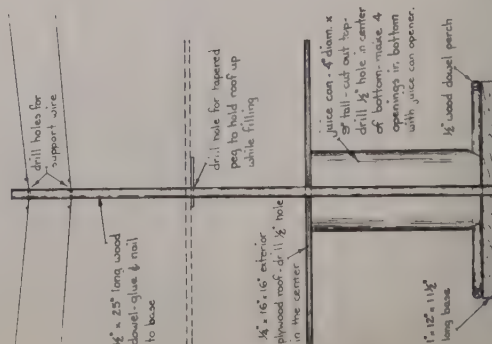
11



GENERAL VIEW

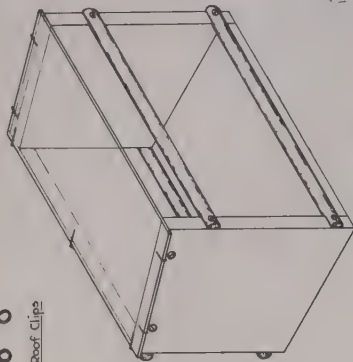
AGRICULTURAL ENGINEERING DEPARTMENT UNIVERSITY OF CONNECTICUT	
JUICE CAN FEEDER	SHEET 1 OF 1
DR BY RBL	PLAN # 608
DATE 2-26-64	

SECTION



SECTION

66
Roof Clips

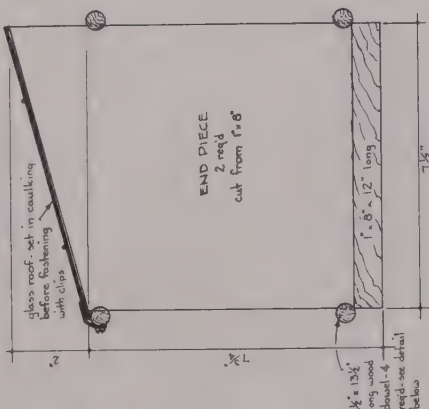


GENERAL VIEW

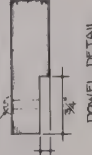
MATERIALS

- Roof 1-1/2" x 8" x 14" double strength glass
- End 2-1" x 8" x 9 1/2" - from 1-1/2" x 8" x 12" long board
- Base 1-1" x 8" x 12"
- Dowel 4-1/2" x 13 1/2" long or 4 1/2" final feet of dowel
- Note square stock may replace dowels
- Roof Clips - bend (as shown above) from 1/2" brass welding rod or similar material

SECTION

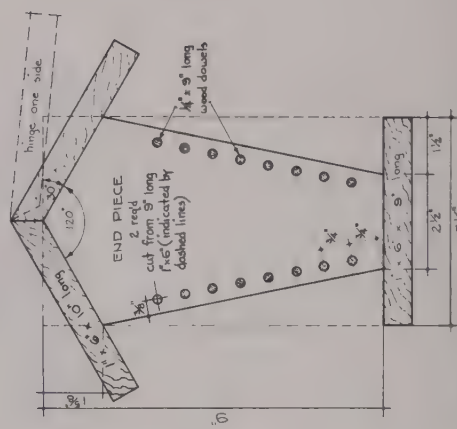


drill hole for screw



DOWEL DETAIL

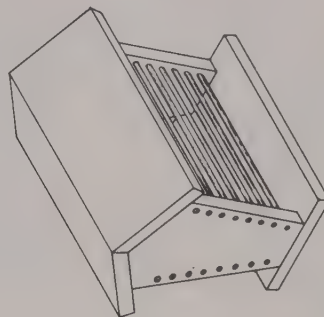
AGRICULTURAL ENGINEERING DEPARTMENT UNIVERSITY OF CONNECTICUT	
WINDOW SILL FEEDER	SHEET 1 OF 1
DR BY RBL	PLAN # 607
DATE 2-21-64	



SECTION

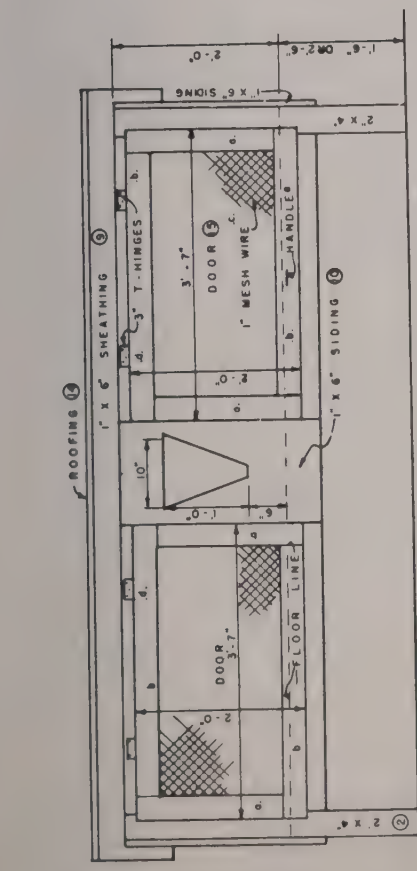
MATERIALS

- Roof 2-1" x 6" x 10"
- End 2-1" x 8" x 9"
- Base 1-1" x 8" x 9"
- Dowel 1/2" x 13 1/2" long or 1/2" final feet of dowel

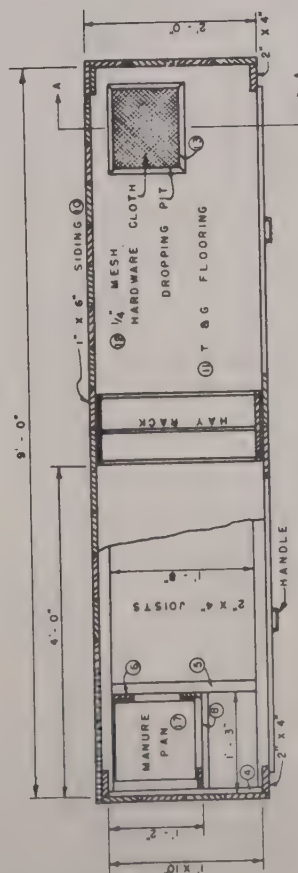


GENERAL VIEW

AGRICULTURAL ENGINEERING DEPARTMENT UNIVERSITY OF CONNECTICUT	
SUET FEEDER	SHEET 1 OF 1
DR BY RBL	PLAN # 606
DATE 1-21-64	

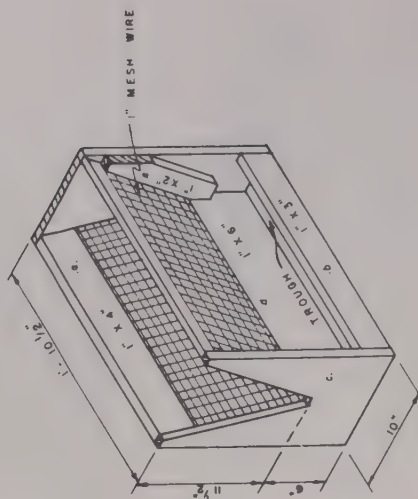


FRONT ELEVATION



FLOOR PLAN

CROSS SECTION A-A

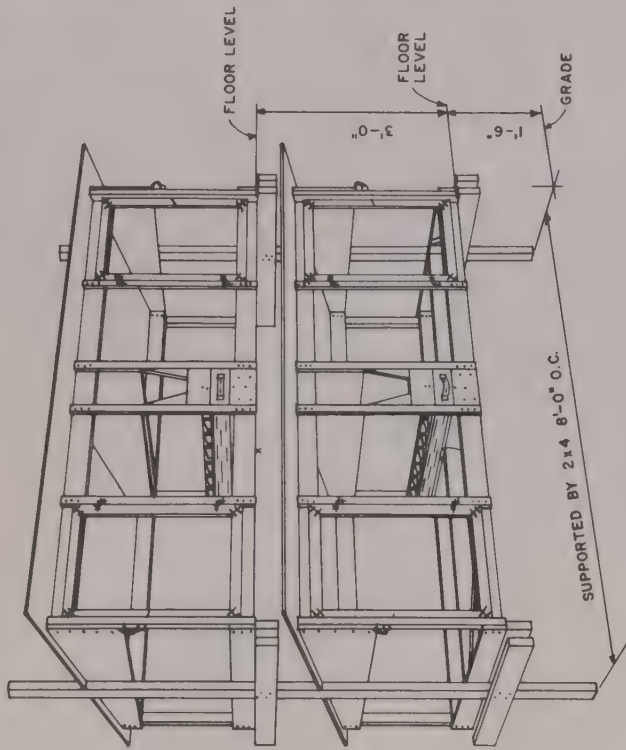


ISOMETRIC OF MAY RACK ⑩

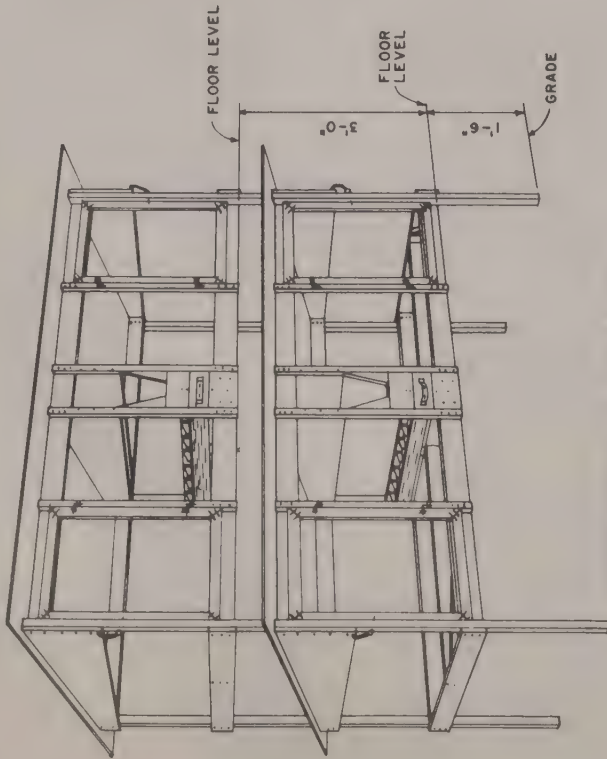
BILL			OF		MATERIALS	
NO.	SIZE	NO.	SIZE	NO.	SIZE	
1	2 PCS 2" X 4" X 3'-0"	13	60 LINEAR FT. OF 1" X 1/2"	4	1 PCS 1" X 6" X 1'-8 1/2"	
2	2 PCS 2" X 4" X 3'-6"		STRIP	1	4 PCS 1" X 2" X 1'-4"	
3	4 PCS 2" X 4" X 9'-0"	14	36 50 FT ROOFING	6	1 PCS 2'-0" X 2'-6"	
4	4 PCS 1" X 4" X 1'-10"	15	DOORS	1	MESH WIRE	
5	2 PCS 2" X 4" X 1'-8"	6	4 PCS 1" X 4" X 2'-0"	17	2 12" X 12" MANURE PAN	
6	6 PCS 1" X 2" X 1'-0"	b	4 PCS 1" X 4" X 3'-7"			
7	2 PCS 1" X 2" X 1'-4"	c	2 PCS 2'-0" X 3'-7"			
8	6 PCS 1" X 4" X 1'-3"		1" MESH WIRE	3 LBS	NO. 8 D NAILS	
9	19 PCS 1" X 6" X 4'-0"	4	4 - 3" T-HINGES	1 LB	NO. 6 D NAILS	
10	18 PCS 1" X 6" X 1'-10"	6	2 DOOR HANDLES & 4 HOOKS			
			HAY RACK.			
		16				
11	18 50 FT T & G FLOORING	6	2 PCS 1" X 4" X 1'-8 1/2"			
	2 PCS 1'-0" X 1'-0" X 2'	b	2 PCS 1" X 3" X 1'-8 1/2"			
12	MESH HARDWARE CLOTH	c	2 PCS 1" X 10" X 1'-6"			

TWO UNIT RABBIT HUTCH
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL ENGINEERING DEPT
V P I BLACKSBURG, VA
U S DEPT OF AGRICULTURE COOPERATING

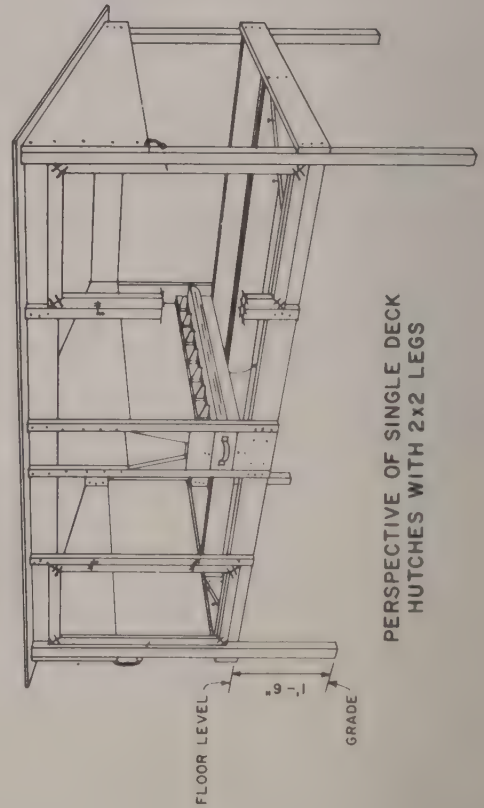
DRAWN HMG DATE APRIL
CHECKED MAM SHEET 1 OF 1
PLN NO
F 5, 30



PERSPECTIVE OF DOUBLE DECK
HUTCHES HUNG ON 2x4 POSTS 8'-0" O.C.



PERSPECTIVE OF DOUBLE DECK
HUTCHES WITH 2x2 LEGS



PERSPECTIVE OF SINGLE DECK
HUTCHES WITH 2x2 LEGS

NOTE:
POULTRY NETTING NOT SHOWN
ON THESE PERSPECTIVES.

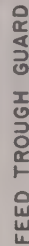
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF GEORGIA
UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE
AND MECHANICAL ARTS
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

HUTCHES FOR RABBITS

N. M. B. CAL '72

6137

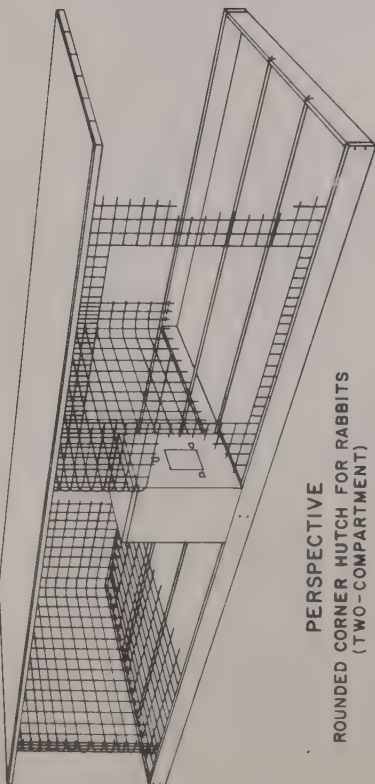
SHEET 1 OF 4



BASED ON NEW MEXICO PLAN

NOTES:

- A. ASSEMBLE WOOD FRAME AND COUNTERSINK METAL FLOOR SUPPORTS.
- B. STAPLE THE 16-GAUGE, 30-INCH BY 8-FOOT GALVANIZED WIRE MESH TO THE FRAME, USING 1-BY 1/2-INCH MESH FOR SMALL AND MEDIUM BREEDS OF RABBIT, AND 1-BY 3/8-INCH FOR THE LARGER BREEDS.
- C. THE CURVED WALLS ARE FORMED FROM 1/2-BY 1/2-INCH GALVANIZED WIRE MESH. CUT THE TWO BOTTOM STRANDS OF WIRE, LEAVING 1-INCH VERTICAL PROJECTIONS. THE 1-INCH PROJECTIONS ARE PLACED INSIDE THE WOOD FLOOR FRAME, FORMING TWO COMPARTMENTS, AND STAPLED.
- D. CUT THE DOOR OPENINGS BEGINNING 4-INCHES FROM THE FLOOR. THE OPENING IS REINFORCED BY TURNING 2-INCHES UP ON THE INSIDE ACROSS THE TOP AND 2-INCHES DOWN ON THE INSIDE ACROSS THE BOTTOM.
- E. CUT EVERY THIRD STRAND ON THE TOP TWO HORIZONTAL STRANDS OF THE SIDE AND REAR WALLS. THE 2-INCH TABS FORMED ARE BENT IN AT RIGHT ANGLES ACROSS THE BACK AND IN GRADUATED DEGREES ON SIDES TO GIVE A 2-INCH PITCH TO THE ROOF. TURN THE GAGE SECTION UPSIDE DOWN ON THE ROOF SHEATHING. THAT HAS BEEN ASSEMBLED WITH CORRUGATED FASTENERS, AND STAPLE COVER ROOF WITH A 3-FOOT WIDE PIECE OF 90-POUND ROOFING FELT AND NAIL.
- F. THE DOORS ARE OF 1-BY 1-INCH WIRE MESH CUT 21-BY 24-INCHES. TO GIVE RIGIDITY TURN DOWN 1-INCH ON INSIDE ACROSS THE TOP AND TURN UP 2-INCHES ON INSIDE ACROSS THE BOTTOM. MAKE THE DOOR FASTENERS AS SHOWN. USE ALUMINUM GAGE CLIPS FOR ALL FASTENERS AND HINGES. HINGE DOOR ON FEEDER SIDE WITH 4-CAGE CLIPS. INSTALL DOOR FASTENER WITH SMALL WIRE TIES AT THE 13/4- AND 13/8-INCH SHANKS, SO FASTENER OVERLAPS THE EDGE OF THE CLOSED DOOR TO MAKE IT SECURE.

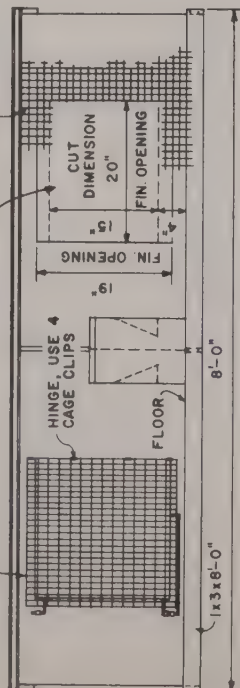


PERSPECTIVE
ROUNDED CORNER HUTCH FOR RABBITS
(TWO-COMPARTMENT)

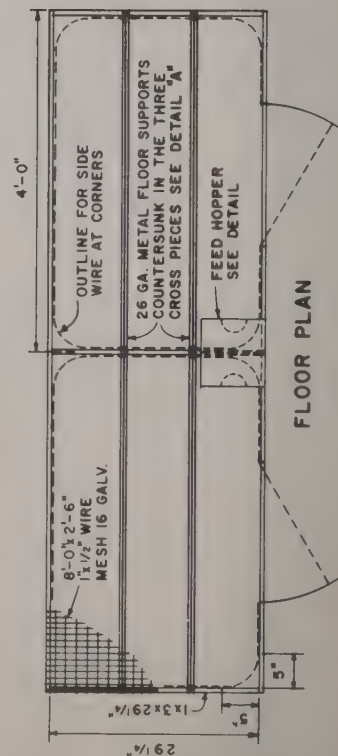
DOOR FROM 24 GA. 1 1/2" MESH CUT 21 1/2" x 24" WITH 1" TURNED DOWN ON TOP AND 2" TURNED UP ON BOTTOM FOR 21 1/2" x 21" DOOR.

DOOR OPENING, MAKE 2" FOLD TOP AND BOTTOM

TWO PIECES 1 1/2" x 24 GA. WIRE MESH 2'-0" x 13'-0"



FRONT ELEVATION



FLOOR PLAN

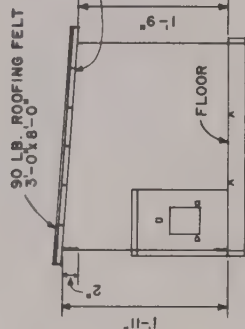


26 GA. GALVANIZED SHEET METAL 3 1/8'-0"

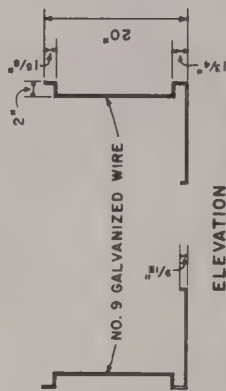
NOTE:
TWO METAL FLOOR SUPPORTS ARE REQUIRED

DETAIL "A"
METAL FLOOR SUPPORT

SIX 1x6x8'-0" BOARDS FASTENED TOGETHER WITH 3/8x1/4" CORRUGATED FASTENERS

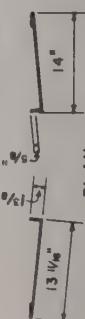


SECTION



ELEVATION

LEFT DOOR FASTENER
RIGHT DOOR FASTENER



PLAN

DOOR FASTENERS

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF GEORGIA
UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

HUTCHES FOR RABBITS

N. M. & CAL. '72

6137

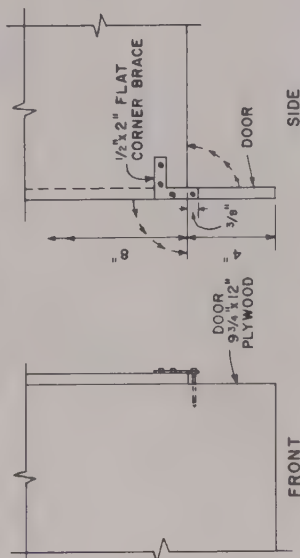
SHEET 3 OF 4

BASED ON USDA LEAFLET NO. 378

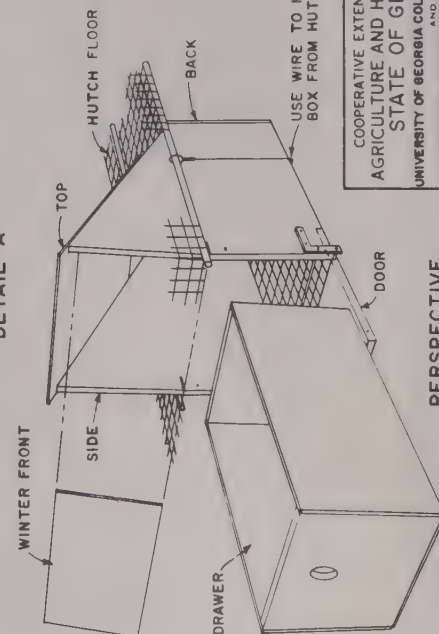
1. COVER ALL EXPOSED "CHEWABLE EDGES" WITH METAL
2. ALL PLYWOOD TO PLYWOOD JOINTS SHOULD BE NAILED AND GLUED.
3. HARDBOARD IS $\frac{1}{8}$ " TEMPERED.
4. PLYWOOD IS $\frac{1}{2}$ " A-C EXT. DFPA



RABBIT NEST BOX DRAWER

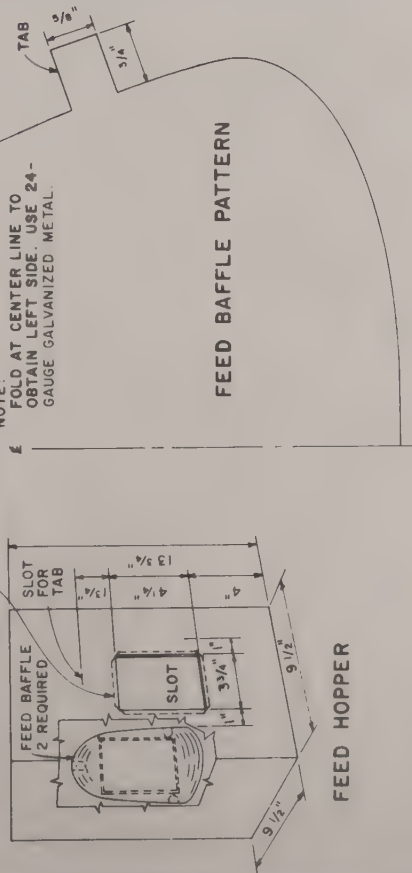


DETAIL "A"



PERSPECTIVE
RABBIT NEST BOX

NOTE:
FOLD AT CENTER LINE TO
OBTAIN LEFT SIDE. USE 2
GAUGE GALVANIZED METAL.



FED HOPPER

- A. THE FEED HOPPER, MADE FROM A 5-GALLON CAN, SUPPLIES FEED TO BOTH UNITS OF A DOUBLE HUTCH. BEGINNING 4 1/4-INCHES FROM THE BOTTOM OF THE CAN, CUT AN OPENING 3 3/4-INCHES HIGH AND 3 1/4-INCHES WIDE. TURN INSIDE 1/4-INCH TO MAKE SMOOTH EDGE.
- B. THE BAFFLE, LID, AND DIVIDER ARE MADE FROM 24-GAUGE GALVANIZED METAL.
- C. CUT THE BAFFLE USING FULL SIZE 1/2 PATTERN SHOWN, FOLD AT CENTERLINE TO OBTAIN OTHER 1/2-PATTERN. INSERT TABS THROUGH SLOTS SHOWN AND BEND FOR THE LID: CUT METAL 1-INCH LARGER, ON ALL SIDES, THAN TOP OF CAN.
- D. ON THREE SIDES 1/4-INCH IS FOLDED BACK TO MAKE A SMOOTH EDGE, AND THEN 3/4-INCH IS BENT FLAT ON RIGHT ANGLES TO HOLD THE LID IN PLACE. THE 1-INCH IS FOLDED FLAT ON THE FOURTH SIDE FOR RIGIDITY. THIS ALLOWS THE CARETAKER TO SLIDE THE LID OFF THE CAN WHEN REPLENISHING THE SUPPLY OF PELLETS.

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF GEORGIA
UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

HUTCHES FOR RABBITS

6137	SHEET 4 OF 4
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BASED ON CALIF. PLAN NO. OSA #210



GREENHOUSES

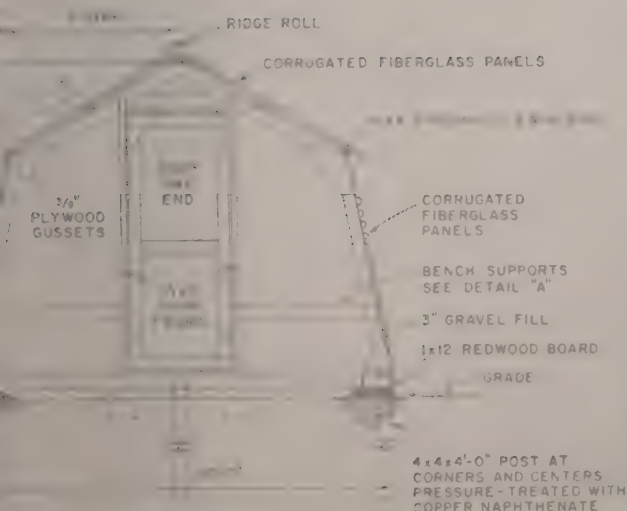
ISOMETRIC VIEW

DETAIL "A"

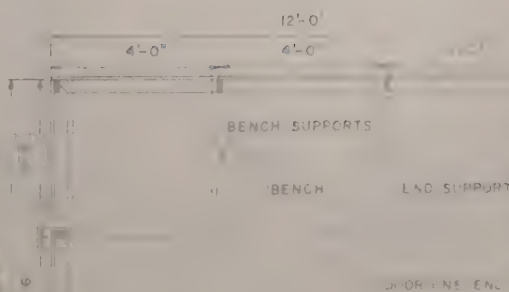
GUSSET "A"

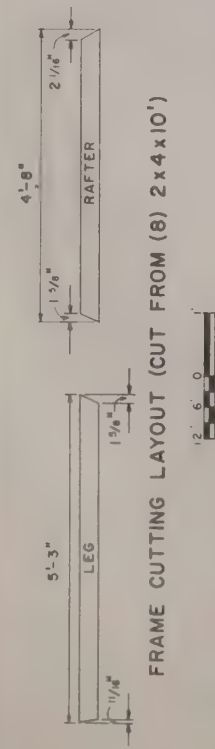


END VIEW

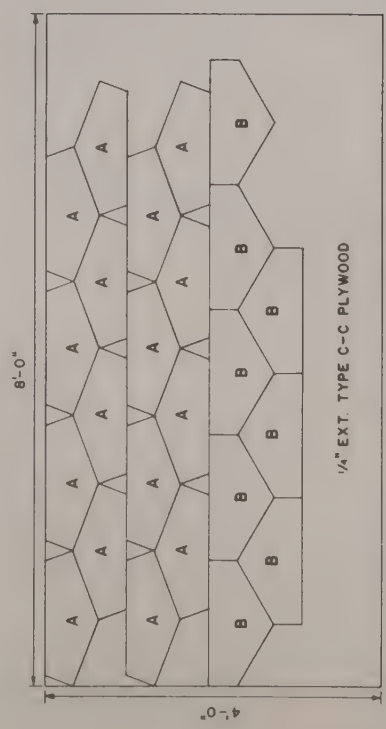


CROSS SECTION

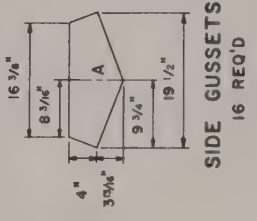




FRAME CUTTING LAYOUT (CUT FROM (8) 2x4x10')



PLYWOOD SHEET CUTTING DIAGRAM



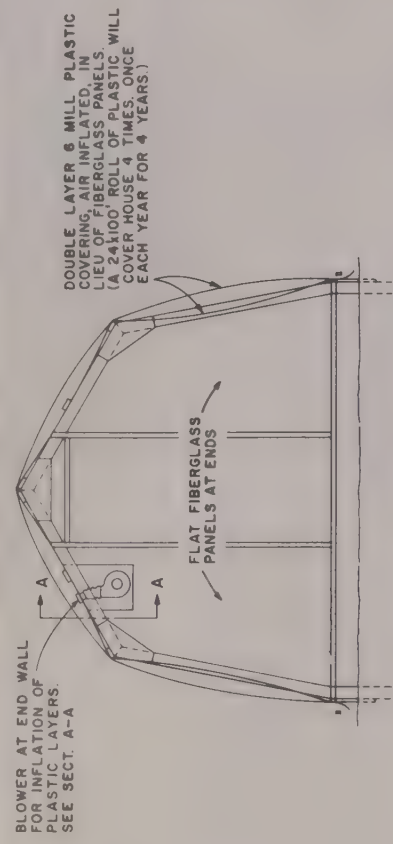
SIDE GUSSETS
16 REQ'D



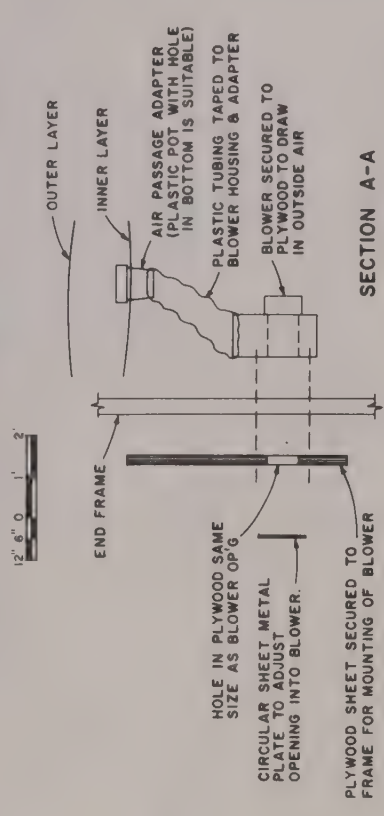
HEAD GUSSETS
8 REQ'D

BILL OF MATERIALS

- CORRUGATED FIBERGLASS REINFORCED PANELS (FRP) • 5 OZ. COATING:
- ROOF PANELS (6) 24x10' CUT IN HALF
- SIDE PANELS (5) 24x12' 2 SHEETS EACH SIDE
- END PANELS (5) 24x12' CUT LENGTHWISE
- RIDGE ROLL (1) 12' LENGTH
- AT END WITH NO DOOR
- (1) 12' LENGTH
- TO MAKE FRAMES
- (2) 24x10' SILL AT ENDS (P.T. COPPER NAPHTHENATE)
- (2) 24x12' SILL AT SIDES (P.T. COPPER NAPHTHENATE)
- (2) 24x16' END FRAMING
- BENCH SUPPORTS NOT INCLUDED
- (8) 3/4x4x12' FOR PURLINS & DOOR
- (2) 4x4x16' P.T. POST FOR FOOTINGS
- (1) 1x12x12' & (2) 1x12x10' REDWOOD BOARDS
- PLYWOOD GUSSETS. SEE CUTTING DIAGRAM.
- CHECK WITH FIBERGLASS SUPPLIER FOR NECESSARY RELATED HARDWARE & COVERING INSTRUCTIONS.
- NAILS, HINGES & LATCH.



ALTERNATE CROSS SECTION



SECTION A-A

ENVIRONMENTAL CONTROL

HEATING: TO MAINTAIN A TEMPERATURE DIFFERENCE OF 60° BETWEEN INSIDE & OUTSIDE
 30,000 BTU/HR. DOUBLE COVERING
 20,000 BTU/HR. SINGLE COVERING
 CONNECTION TO HOME HEATING SYSTEM IS MOST DESIRABLE. IF NOT POSSIBLE, USE GAS OR OIL HEATERS VENTED TO THE OUTSIDE. ELECTRIC HEATERS ARE EASY TO INSTALL, CLEAN, BUT EXPENSIVE TO OPERATE. WHEN USING OIL OR GAS, BE SURE TO PROVIDE A FRESH AIR SUPPLY DIRECTLY TO THE HEATER TO SUPPLY OXYGEN FOR COMBUSTION.
 VENTILATING:
 REQUIRE A TWO SPEED FAN RATED AT 1000 CFM. AN AUTOMATIC AIR INLET OF 2 SQ. FT. IS REQUIRED. THE FAN CAN BE MOUNTED IN ONE GABLE END AND AIR INLET IN THE OTHER. BOTH SHOULD BE CONTROLLED BY A THERMOSTAT. FOR MORE INFORMATION SEE USDA BULLETIN NUMBER 357 "BUILDING HOBBY GREENHOUSES."

CONSTRUCTION NOTES

GENERAL

SELECT A LEVEL, WELL DRAINED SITE NEAR WATER AND ELECTRICITY
TREAT BASE WITH TWO COATS OF A COPPER NAPHTHENE WOOD PRESERVATIVE
SCREW ANCHORS INTO GROUND, SLOT BASE AND TIGHTEN ANCHOR TO BASE.

FRAME
USE CONSTRUCTION GRADE FIR
PAINT FRAME WITH AN EXTERIOR WHITE PAINT.
DOORS CAN BE PLACED IN ONE OR BOTH END WALLS.

COVERING
FOR YEAR AROUND USE, TWO LAYERS OF PLASTIC SHOULD BE USED.
FOR SPRING AND FALL USE, SINGLE LAYER IS SUFFICIENT.
TO REDUCE LABOR OF REPLACING PLASTIC, A 4-5 YEAR ULTRA-VIOLET RESISTANT VINYL PLASTIC SHOULD BE USED ON THE OUTSIDE.
INNER LAYER CAN BE POLYETHYLENE AND CAN BE ATTACHED WITH EITHER BATTEN STRIPS OR

3/8" STAPLES OVER HEAVY TWINE.

WALKS AND BENCHES

A CENTER WALK OF STONES OR BRICKS LAID IN SAND CAN BE ADDED AFTER THE GREENHOUSE IS BUILT.
BENCHES 30-32 INCHES HIGH AND TREATED WITH A COPPER NAPHTHENE WOOD PRESERVATIVE CAN BE ADDED FOR CONVENIENCE.

VENTILATION

A 10 INCH DIAMETER FAN WITH AUTOMATIC LOUVER AND THERMOSTAT SHOULD BE PLACED ABOVE DOOR ON ONE END WALL.
LOCATE A 10 OR 12 INCH INTAKE LOUVER ABOVE DOOR ON OPPOSITE END WALL.
PLACE THERMOSTAT ALONG SIDEWALL NEAR PLANT LEVEL.

HEAT

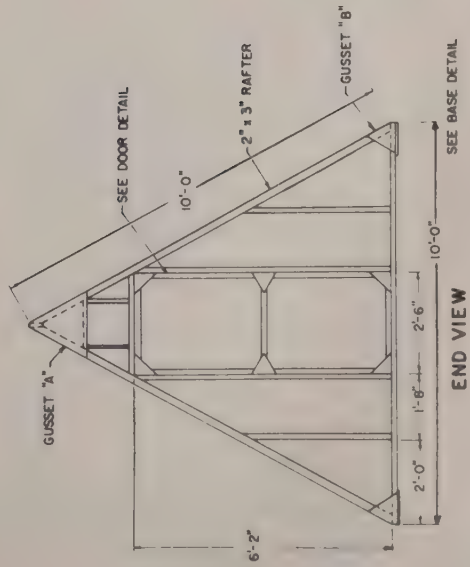
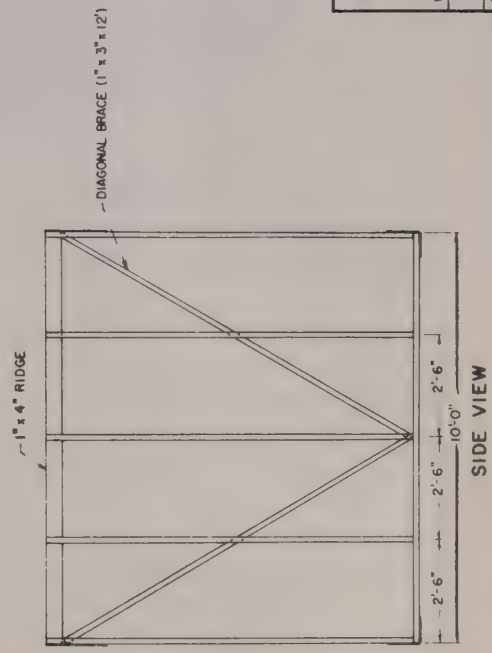
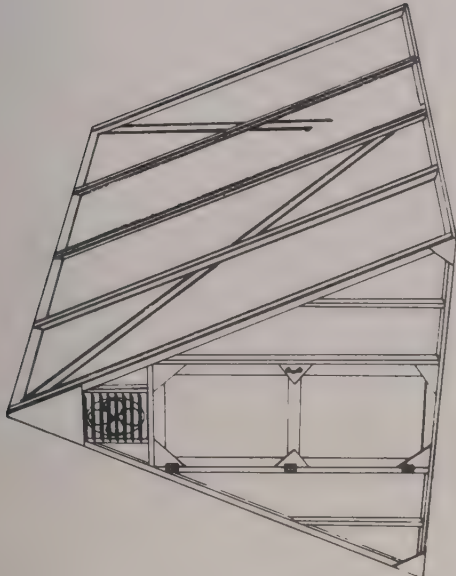
HEAT MAY BE SUPPLIED FROM THE HOME HEATING SYSTEM OR FROM A SEPARATE HEATER. OUTPUT REQUIRED CAN BE OBTAINED FROM THE FOLLOWING TABLE.

	SINGLE LAYER PLASTIC BTU/HR		DOUBLE LAYER PLASTIC BTU/HR	
30°	6800	10200	13600	3600
20°	10200	13600	17000	5700
10°	13600	17000	20400	7600
0°	17000	20400	23800	9500
-10°	20400	23800	27100	11400
-20°	23800	27100	30400	13300
-30°	27100	30400	33700	15200
-40°	30400	33700	37000	17100
-50°	33700	37000	40300	19000
-60°	37000	40300	43600	20900
-70°	40300	43600	46900	22800
-80°	43600	46900	50200	24700
-90°	46900	50200	53500	26600

MINIMUM OUTSIDE TEMPERATURE

MINIMUM INSIDE TEMPERATURE

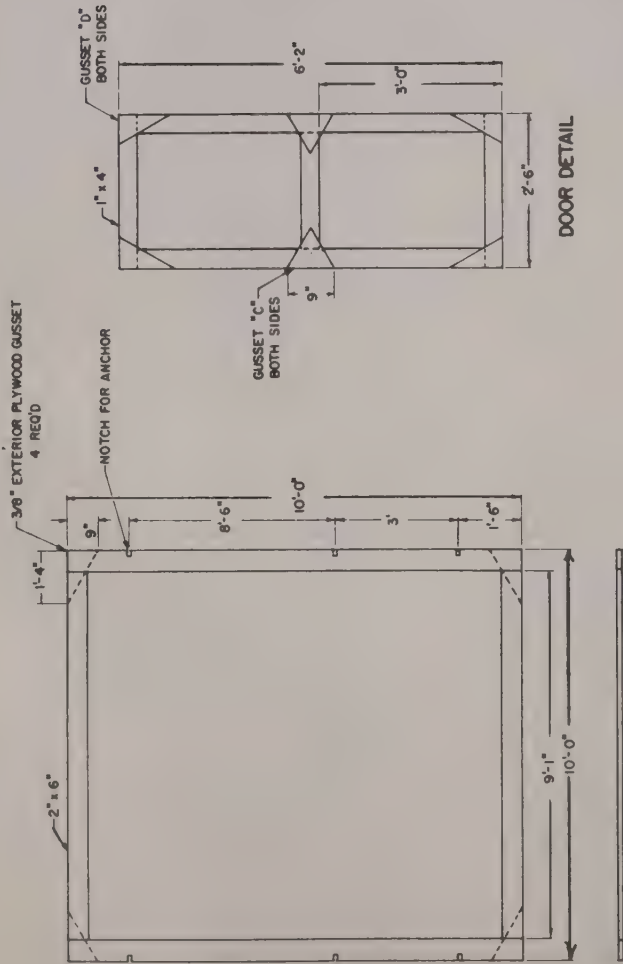
PERSPECTIVE



SIDE VIEW

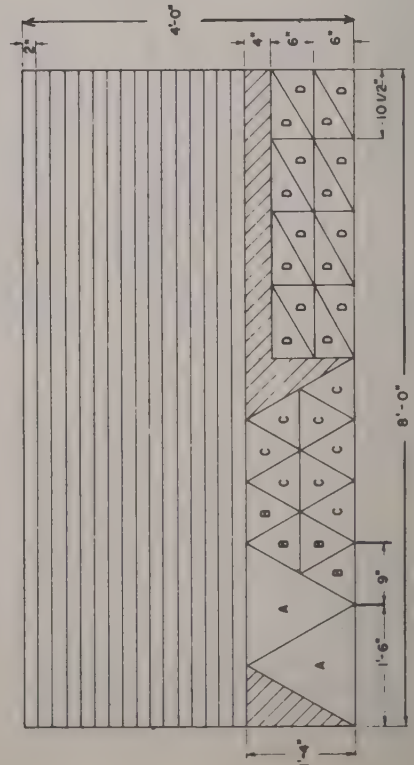
END VIEW

SEE BASE DETAIL



BASE DETAIL

DOOR DETAIL

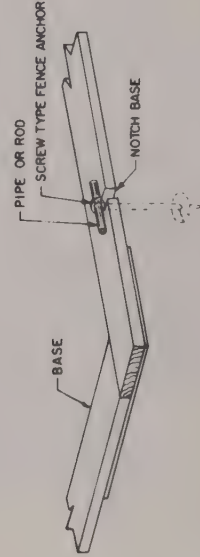


PLYWOOD CUTTING DIAGRAM

NOTE: USE 1/4" EXTERIOR PLYWOOD
CUT ONE SHEET INTO 2" STRIPS & ONE AS SHOWN

BILL OF MATERIALS

QUANTITY	ITEM	LOCATION
4 PCS.	2" x 6" x 10'	BASE
15 PCS.	2" x 3" x 10'	RAFTERS, END WALLS & DOOR FRAMES
7 PCS	1" x 4" x 10'	RIDGE & DOORS
4 PCS.	1" x 3" x 12'	DIAGONAL BRACE
2 SHTS.	4" x 8" x 1/4" EXT. PLYWOOD	BATTEN STRIPS & GUSSETS
3 PR.	3" STEEL BUTT HINGES	DOOR
1/2 GAL.	CORR. NAPHTHENE WOOD PRESERVATIVE	BASE
1 GAL.	WHITE EXTERIOR PAINT	ALL FRAMEWORK
6	3" DIA. x 15" LG. SCREW TYPE FENCE ANCHORS	TIE DOWN
2	DOOR LATCHES	DOOR
70'	50" WIDE x 8 MIL POLY-VINYL w/ULTRA-VIOLET INHIBITOR	OUTSIDE COVERING
1 PC.	10' x 35' x 4 MIL POLYETHYLENE	INSIDE COVERING
3 LBS.	4d COMMON NAILS	
1 LB.	8d COMMON NAILS	



ANCHOR INSTALLATION

CONSTRUCTION NOTES

GENERAL

SELECT A LEVEL, WELL DRAINED SITE.
PREFERRED LOCATION: SOUTH OR
SOUTHEAST, EAST, WEST.
PAINT POSTS, BENCHES AND LUMBER THAT
IS NEAR THE GROUND WITH THREE COATS
OF COPPER NAPHTHENE WOOD PRE-
SERVATIVE.

FRAME

USE CONSTRUCTION GRADE FIR LUMBER.
PAINT FRAME WITH AN EXTERIOR WHITE PAINT.
DOOR CAN BE PLACED AT EITHER END.
USE FLASHING BETWEEN HOUSE WALL AND
GREENHOUSE ROOF.
CAULK ALL CRACKS.

COVERING

ROUND AND SMOOTH ALL EDGES
FOR SPRING AND FALL USE.
USE SINGLE LAYER OF 6 MIL POLYETHYLENE
PLASTIC HELD IN PLACE BY 1"x2" FRING
STRIPS.
FOR YEAR AROUND USE 2 LAYERS OF POLY-
ETHYLENE WITH UV INHIBITOR SEPARATED
BY A 2"x2" SPACER.
PLASTIC SHOULD BE APPLIED IN SEPTEMBER
OR OCTOBER.
5 OZ CLEAR FIBERGLASS CAN BE USED AS A
COVERING TO REDUCE MAINTENANCE.

WALKS

A CENTER WALK OF PEA STONE OR
BRICKS LAID IN SAND CAN BE ADDED
AFTER THE GREENHOUSE IS BUILT.

VENTILATION

A 10 INCH DIAMETER FAN WITH AUTOMATIC
BLOWER AND THERMOSTAT SHOULD BE
USED.
LOCATE A 10 OR 12 INCH INTAKE LOUVER
ON OPPOSITE END WALL.
PLACE THERMOSTAT ALONG SIDE WALL
NEAR PLANT LEVEL.

HEAT

HEAT MAY BE SUPPLIED FROM THE
HOME HEATING SYSTEM OR FROM A
SEPARATE HEATER. OUTPUT RE-
QUIRED CAN BE OBTAINED FROM
THE FOLLOWING TABLE.

SINGLE LAYER PLASTIC OR DOUBLE LAYER PLASTIC
FIBERGLASS BTU/HR

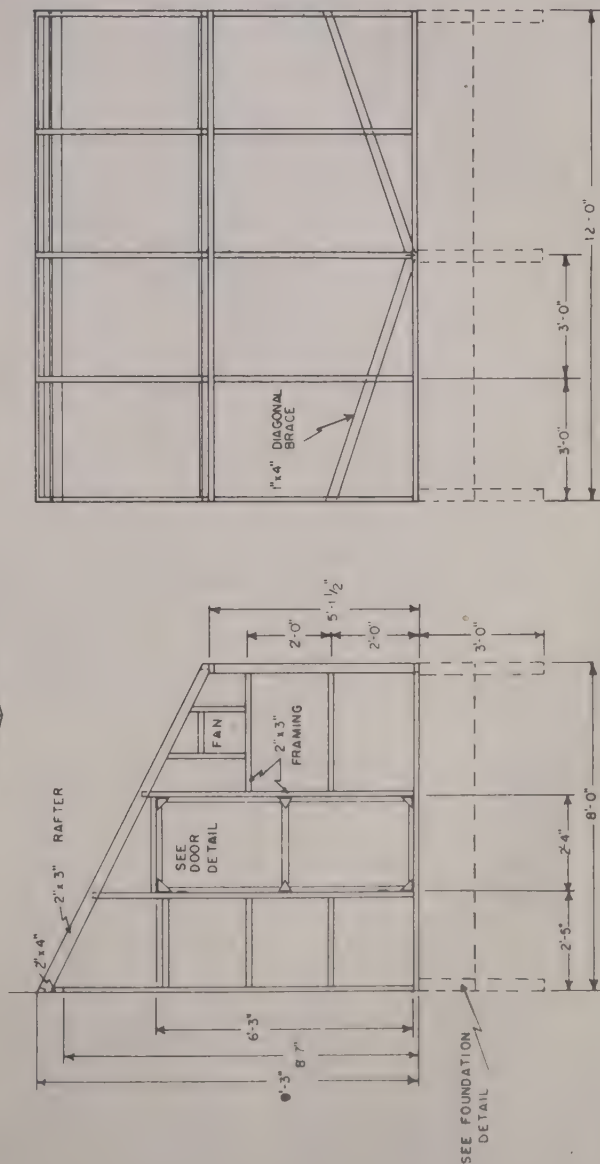
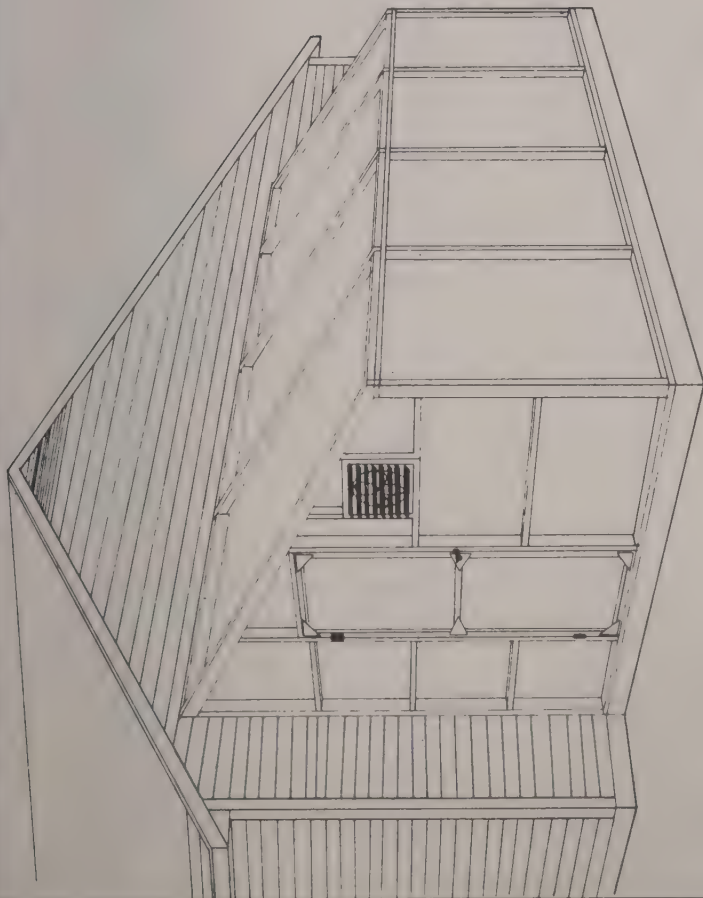
MINIMUM OUTSIDE TEMPERATURE OF	30°	20°	10°	0°	-10°	50°	60°	70°	80°
SINGLE LAYER PLASTIC OR FIBERGLASS	8960	13780	17820	22360	26780	31200	35750	17800	20800
DOUBLE LAYER PLASTIC	9160	11900	15340	17800	20800	23720			

MINIMUM NIGHT TEMPERATURE

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY OF CONNECTICUT
STORRS, CONNECTICUT

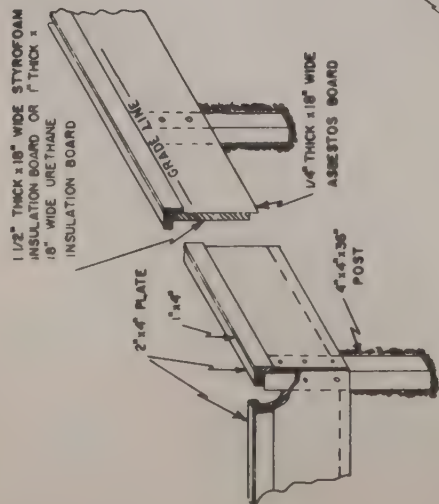
U. S. DEPARTMENT OF AGRICULTURE COOPERATING
AND
8' x 12' LEAN-TO GREENHOUSE

DR BY JWB CK BY DATE 11-28-72 SHEET 2 OF 2
PLAN # 249

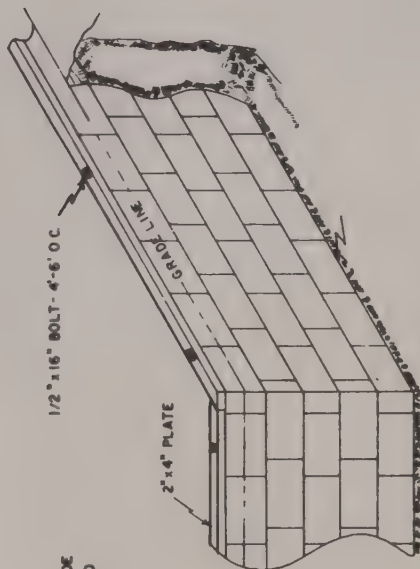


BILL OF MATERIALS

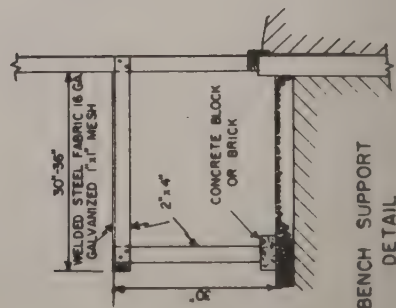
QUANTITY	ITEM	LOCATION
5 PCS	4"x4"x3'	POSTS
5 PCS	2"x3"x14'	RAFTER AND SIDEWALL
1 PC	2"x4"x12'	HOUSE WALL PLATE
3 PCS	2"x3"x12'	BASE
2 PCS	2"x3"x8'	BASE
10 PCS	2"x3"x10'	END WALLS
2 PCS	2"x2"x12'	DOOR
1 PC	1"x4"x14'	1/4" EXTERIOR PLYWOOD SCRAPS - DOOR
200 LIN. FT.	1"x2" FIRING STRIPS	DIAGONAL BRACE
1/2 GALLON	COPPER NAPHTHENE	BATTENS
1 GALLON	WOOD PRESERVATIVE	BASE
1 PR	WHITE EXTERIOR PAINT	ALL FRAMEWORK
1	8" STEEL BUTT HINGES	DOOR
1 ROLL	10"x50' 6 MIL	DOOR LATCH
3 LBS	POLYETHYLENE PLASTIC	COVERING - SINGLE LAYER
2 LBS	10 D GALVANIZED COMMON NAILS	FRAME
	6 D DUPLEX HEAD NAILS	BATTENS



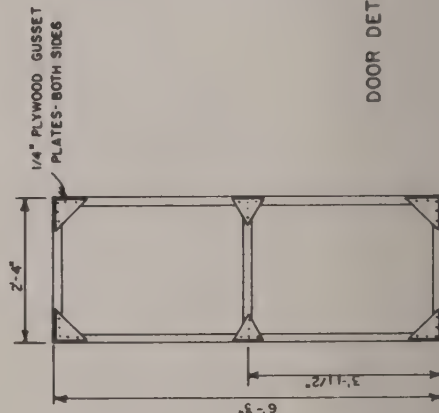
POST FOUNDATION DETAIL



CEMENT BLOCK FOUNDATION
(ALTERNATE METHOD)



BENCH SUPPORT
DETAIL



DOOR DETAIL

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AGRICULTURAL ENGINEERING DEPARTMENT UNIVERSITY OF CONNECTICUT STORRS, CONNECTICUT	
U. S. DEPARTMENT OF AGRICULTURE COOPERATING	
8"x12" LEAN-TO GREENHOUSE	
DR. BY JWB	CL. BY
SCALE 1/2"=10'	DATE 11-28-72
SHEET 2 OF 2	PLANS 248

14'-0" TO OUT OF GREENHOUSE WALLS

2x6 BEVELED ENJOIST

KNEE BLOCK

COLLAR TIE

RAFTER

SIDE VIEW AT "X"

Scale - 3" = 1'-0"

4x4" Post

- DETAILS -

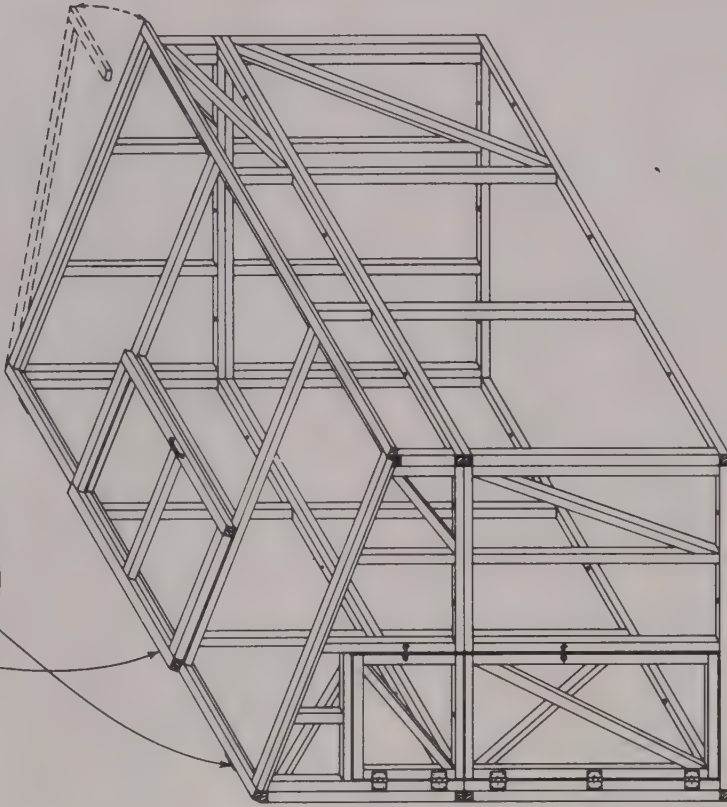
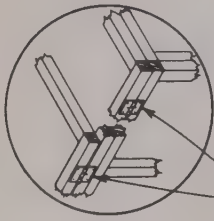
- DETAILS -

Hand-drawn floor plan of a rectangular room. The overall dimensions are 26'-0" wide by 19'-0" deep. The plan includes several labels and measurements:

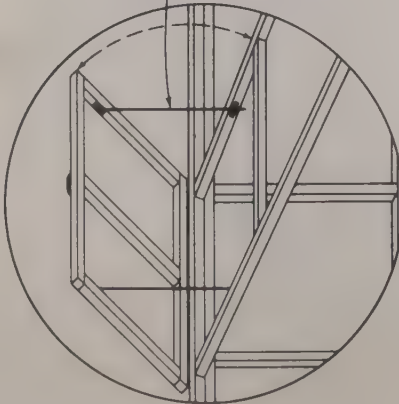
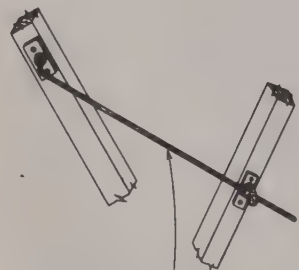
- Top Wall:** Labeled "Cable End Room" on the left and "Cable" on the right.
- Left Wall:** Labeled "Cable" at the top and "Cable" at the bottom.
- Right Wall:** Labeled "Cable" at the top and "Cable" at the bottom.
- Bottom Wall:** Labeled "Cable End Room" on the left and "Cable" on the right.
- Dimensions:**
 - Top wall: 10'-0" Post Service, 9'-0" Post Service, 9'-10" End of Room.
 - Left wall: 10'-0" Post Service, 9'-10" End of Room.
 - Right wall: 10'-0" Post Service, 9'-10" End of Room.
 - Bottom wall: 10'-0" Post Service, 9'-10" End of Room.
- Other Labels:** "X" marks are present on the left and right walls. "Cable" is written vertically on the right wall. "Cable" is written vertically on the bottom wall. "Cable" is written vertically on the left wall.

NOTE: AS SILLS AND EAVES ARE SHOP CUT - 4"x4" POSTS MUST BE SET EXACTLY AS SHOWN ON DRAWINGS.

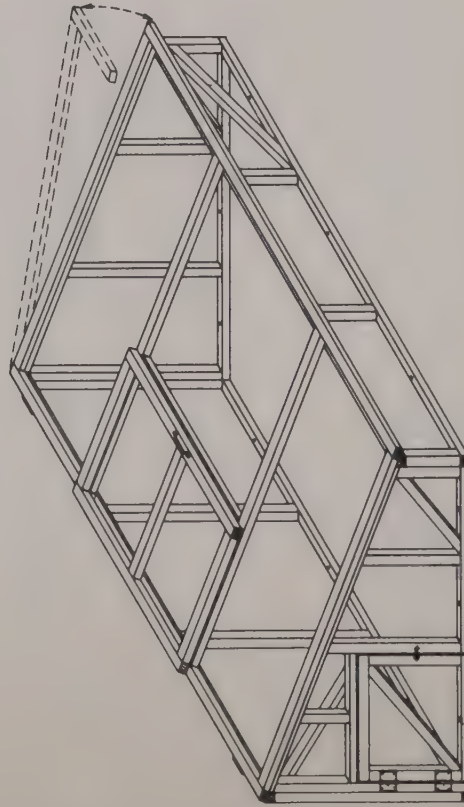
FLORIDA COOPERATIVE EXTENSION SERVICE INSTITUTE OF FOOD AND AGRICULTURE UNIVERSITY OF FLORIDA AND USDA COOPERATING		JOB NO. 10716
DATE 2-27-61		DRAWN BY WJS
CHECKED BY WJS		APPROVED BY WJS
14'x20' PLASTIC GREEN HOUSE 7" EAVE		SHEET OF 1



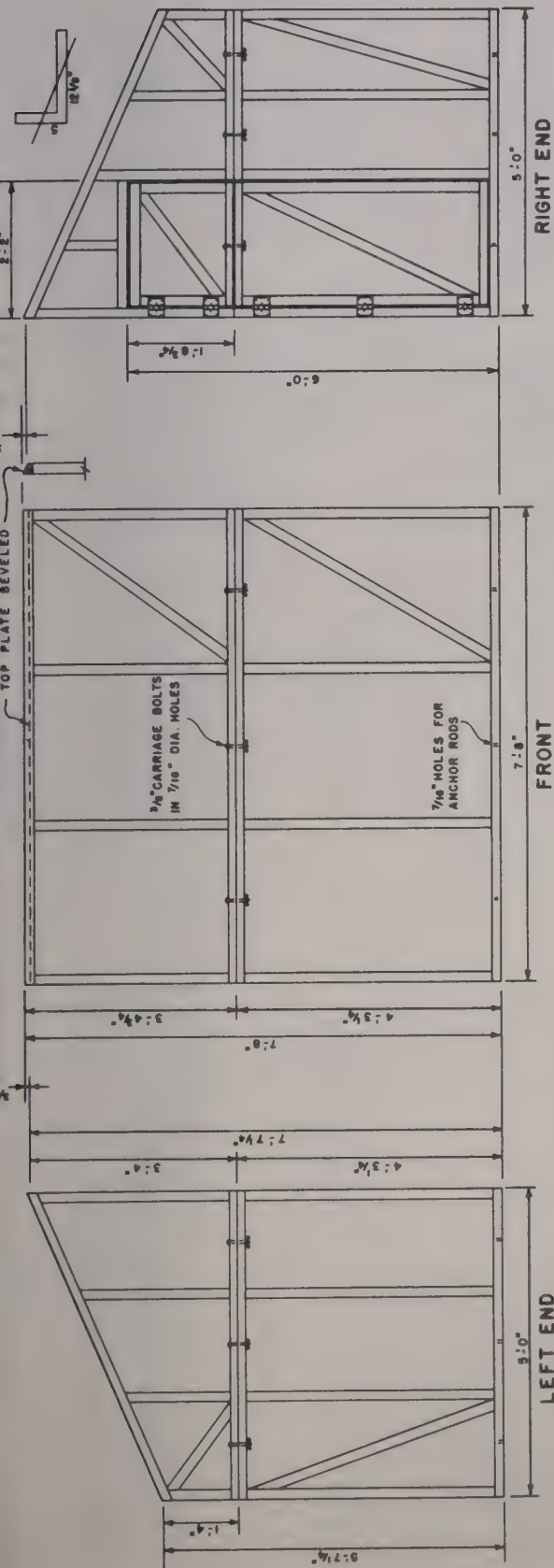
GREENHOUSE ASSEMBLY



VENT OPEN

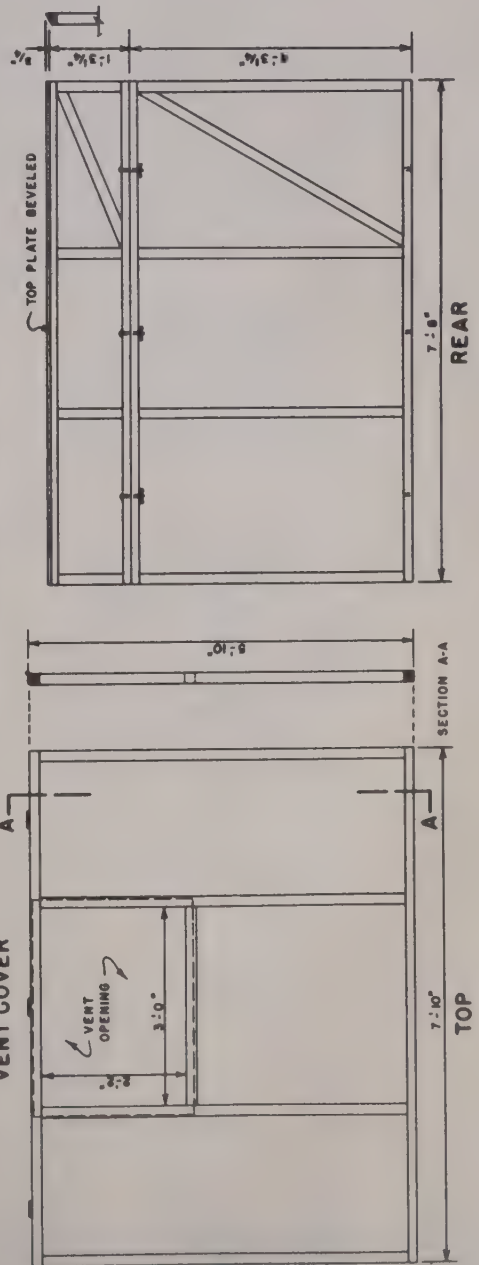
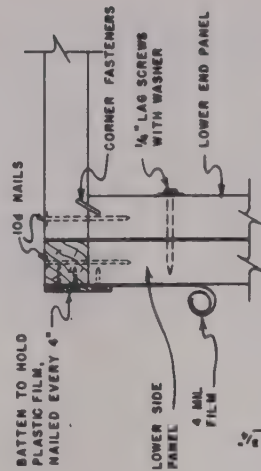


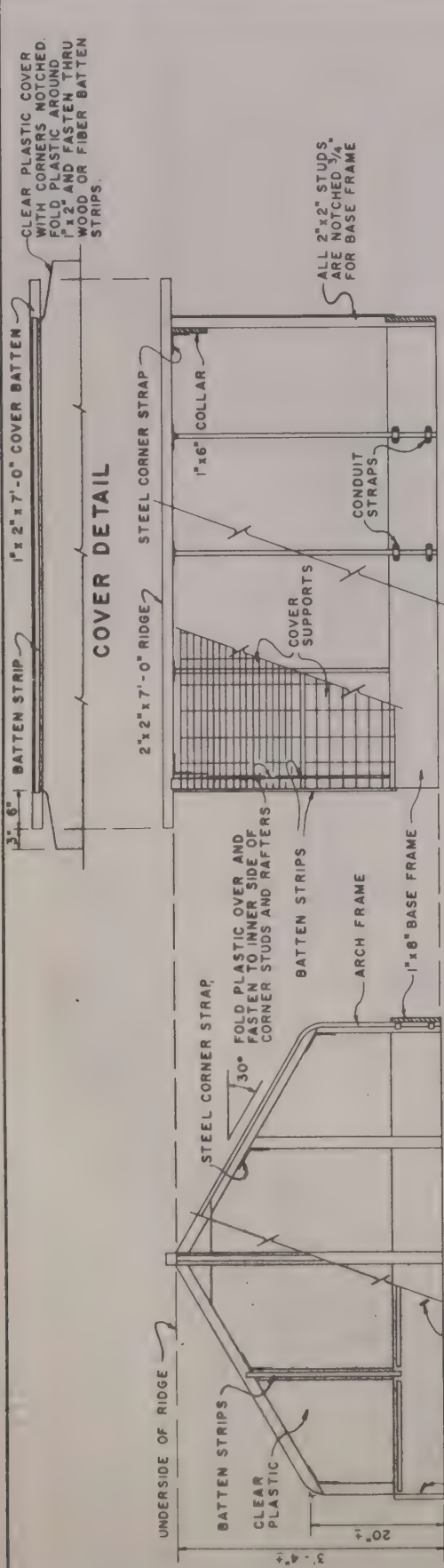
COLDFRAME UNIT



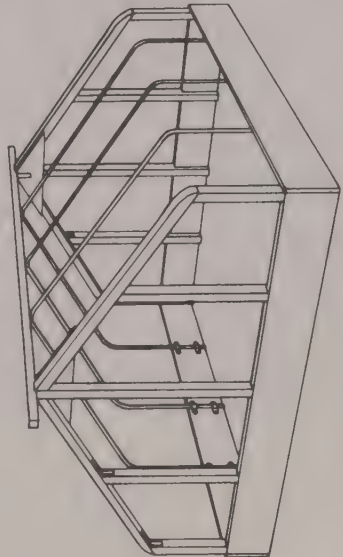
PANEL FRAMING DETAILS

ALL FRAMING MEMBERS ARE 2" x 2", TREATED WITH PRESERVATIVE AFTER CUTTING. CHECK ALL DIMENSIONS ON THE JOB.
 ANCHOR TO GROUND WITH 3/8" x 18" STEEL RODS WITH TOP 2" BENT 90°.
 5 PAIR 3" x 3" LOOSE-PIN BUTT HINGES ARE REQD.





SIDE VIEW
CUT AWAY



MATERIAL LIST

ITEM	QUANTITY	SIZE
BASE FRAME	4 PCS	1" x 8" 6'-0" LONG
COLLARS	1	1" x 6" 2'-8"
RIDGE	1	2" x 2" 7'-0"
RAFTERS	4	2" x 2" 3'-6"
STUDS (CENTER)	2	2" x 2" 4'-0"
COVER BATTENS (OTHER)	4	1" x 2" DIA 10'-0"
ARCH FRAMES	4	1/2" x 1" x 6"
CONDUIT STRAPS	15	3'-0" x 5'-6"
CORNER STRAPS	10	3'-0" x 5'-6"
PLASTIC (ENDS)	2	3'-0" x 6'-0"
COVER SUPPORTS	2	1'-4" x 6'-0"
BATTEN STRIPS	8	1" x 2" x 7'-0"
SCREW HOOKS	8	SEE NOTES
SOIL HEATING CABLE	1	360 W 120'-0"

DUE TO POSSIBLE VARIATIONS IN ANGLES WHEN THE CONDUIT IS BENT FOR ARCH FRAMES, CHECK THE HEIGHTS SHOWN USING AN ARCH FRAME AS A TEMPLATE.

ALL WOOD SHOULD BE TREATED WITH PRESERVATIVE AFTER CUTTING AND BEFORE ASSEMBLY.

METAL PARTS AND FASTENINGS TO BE GALVANIZED OR OTHERWISE RESISTANT TO CORROSION.

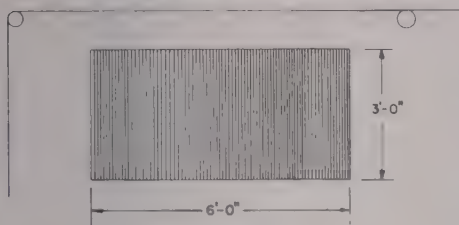
METAL PARTS TO BE FASTENED WITH SCREWS.

WOOD PARTS MAY BE FASTENED WITH SCREWS OR WITH NAILS, CLINCHED WHERE POSSIBLE.

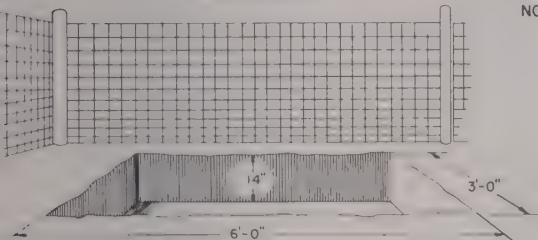
PLASTIC MAY BE FASTENED THRU THE BATTEN STRIPS WITH NAILS, SCREWS OR STAPLES.

SIDE AND TOP COVER SUPPORTS ARE 2 x 4 INCH WELDED WIRE MESH, HOOKED TOGETHER IN PAIRS AND HINGED LOOSELY TO THE RIDGE WITH STRONG CORD.

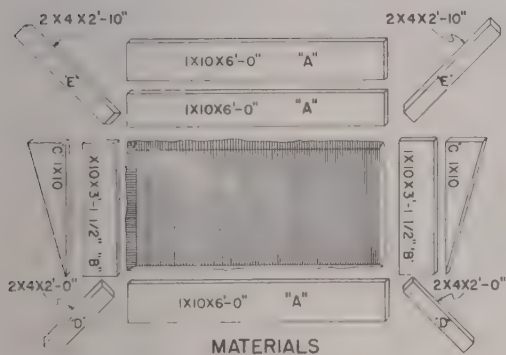
FOR AVERAGE HOME GARDEN



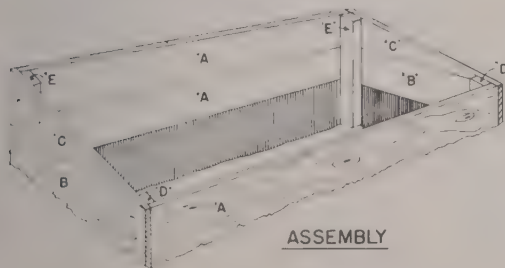
EXCAVATION



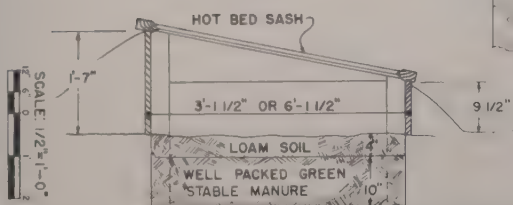
PERSPECTIVE VIEW



MATERIALS



ASSEMBLY

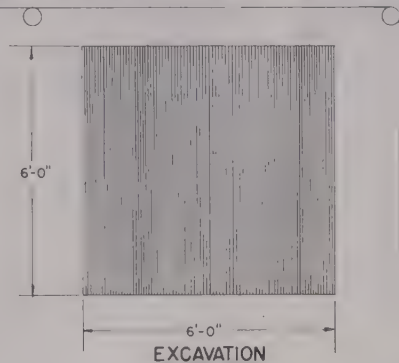


TYPICAL CROSS SECTION

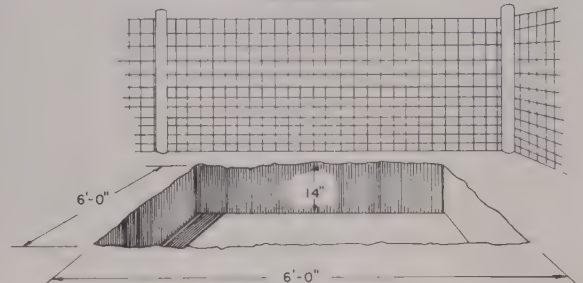
HOT BEDS LARGER THAN 6'X6'
SHOULD BE BUILT 6' WIDE AND
MULTIPLES OF 3' IN LENGTH

LOCATION-A SUNNY SOUTHERN EXPOSURE IN A WELL DRAINED LOCATION IS NEEDED. SOME WINDBREAK PROTECTION ON NORTH IS DESIRABLE.

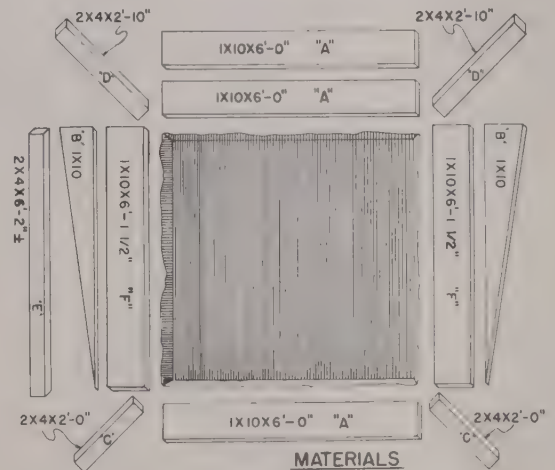
FOR AVERAGE GARDEN & SURPLUS FOR SALE



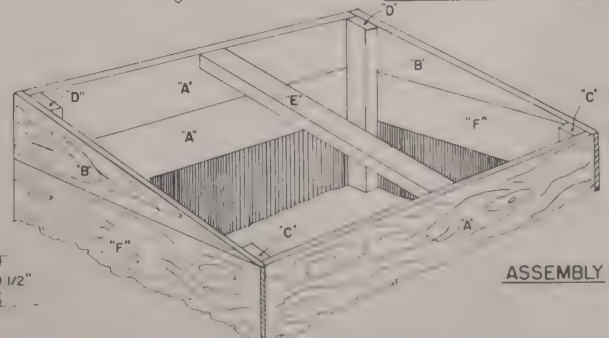
EXCAVATION



PERSPECTIVE VIEW



MATERIALS



ASSEMBLY

NOTE: THE SASH COVER CAN BE MADE OF ONE OF SEVERAL MATERIALS. THE STANDARD GLASS HOT BED SASH IS 3'X6' IN SIZE. IT REPRESENTS THE IDEAL COVER—LASTING MANY YEARS. IT IS SOMEWHAT EXPENSIVE, IF OLD DISCARDED WINDOW SASH ARE AVAILABLE, USE THEM. BUILD SASH CAN BE MADE WITH 4 OR 6 MIL. PLASTIC TACKED ON A LIGHT HOMEMADE FRAME, IT CAN BE SATISFACTORY FROM STANDPOINT OF LIGHT, BUT IS SHORT LIVED, USUALLY TWO SEASONS.

FRAME TO FIT SASH. INEXPENSIVE COVERS CAN BE MADE WITH 4 OR 6 MIL. PLASTIC TACKED ON A LIGHT HOMEMADE FRAME, IT CAN BE MADE IN MANY DIFFERENT SIZES. THIS IS SATISFACTORY FROM STANDPOINT OF LIGHT, BUT IS SHORT LIVED, USUALLY TWO SEASONS.

COVERING

GLASS SASH IS THE BEST TYPE OF COVERING FOR HOTBEDS, BUT IT IS ALSO THE MOST EXPENSIVE. OTHER MATERIAL, SUCH AS PLASTIC-COATED FABRIC, OR TREATED MUSLIN, PROVIDES A SATISFACTORY COVERING.

HEATING CABLE

BOTH LEAD-COVERED AND PLASTIC-COVERED CABLE GIVE SATISFACTORY RESULTS, WHEN USED PROPERLY, IN SOUTHERN AREAS 10 WATTS PER SQ. FOOT HAVE PROVED ADEQUATE. YOUR POWER SUPPLIER OR QUALIFIED DEALER CAN ASSIST YOU IN SELECTING HEATING CABLE.

LAY THE CABLE ON THE SOIL AT THE BOTTOM OF THE BED, OR IF THE BED WAS EXCAVATED, LAY IT ON THE SAND THAT WAS SPREAD ON THE GINDERS OR GRAVEL.

THE SPACING BETWEEN LOOPS OR SECTIONS OF THE CABLE IS IMPORTANT. THE FORMULA FOR THIS IS AS FOLLOWS —

$$\text{SPACING (IN INCHES)} = \frac{12 \times \text{WATTS PER FOOT OF CABLE}}{\text{WATTAGE REQUIRED PER SQ. FT. OF BED}}$$

THE SPACING BETWEEN THE OUTSIDE CABLE AND THE WALL IS HALF THE SPACING BETWEEN CABLE.

MAKE ALL CONNECTIONS TO THE HEATING CABLE WATERTIGHT TO EXCLUDE MOISTURE. THE WIRING SHOULD CONFORM TO THE NATIONAL ELECTRICAL CODE AND TO THE REQUIREMENTS OF THE LOCAL POWER SUPPLIER. IT SHOULD BE INSTALLED BY A REPRESENTATIVE OF THE POWER SUPPLIER OR BY A QUALIFIED ELECTRICIAN.

CONNECT A THERMOSTAT WITH AN OPERATING RANGE OF 30° TO 120°F (15° F. DIFFERENTIAL) IN THE ELECTRIC CIRCUIT TO CONTROL THE TEMPERATURE IN THE BED. THE THERMOSTAT MUST HAVE SUFFICIENT CURRENT-CARRYING CAPACITY TO HANDLE THE BED OR SECTION OF BED THAT IT CONTROLS. DO NOT PLACE THE THERMOSTAT OR BULB DIRECTLY ABOVE A HEATING CABLE OR ALLOW IT TO COME IN CONTACT WITH A CABLE.

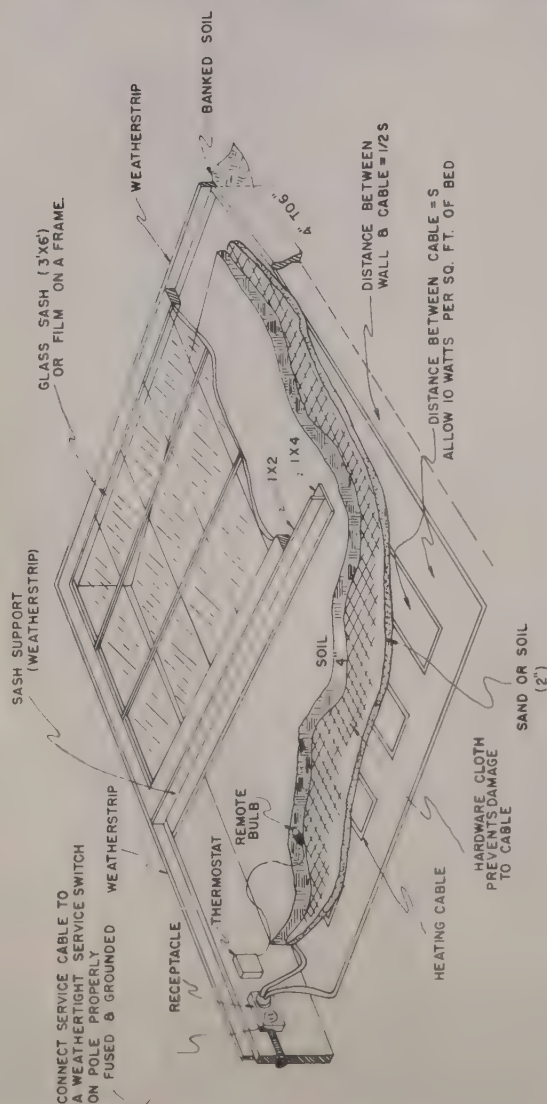
PRECAUTIONS

OBSERVE THESE PRECAUTIONS WHEN PLACING THE CABLE:

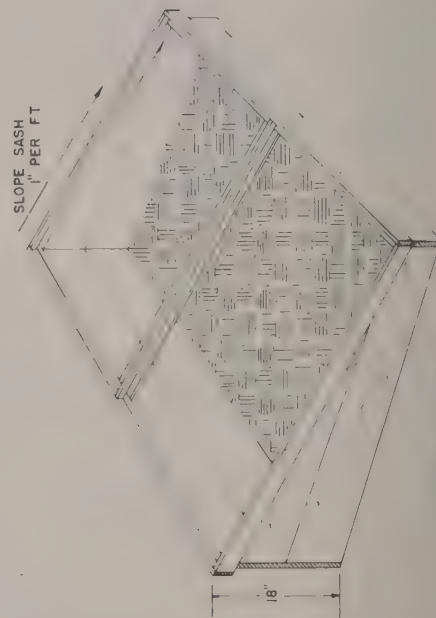
LAY THE CABLE IN POSITION CAREFULLY TO AVOID DAMAGING THE SHEATH OR CONDUCTOR. KINKS MAY DAMAGE OR BREAK THE CABLE.

DO NOT CROSS ONE CABLE OR SECTION OF CABLE OVER ANOTHER.

DO NOT SHORTEN THE LENGTH OF A CABLE. A SHORTENED CABLE MAY BECOME TOO HOT AND BURN OUT.



CONSTRUCTION CUTAWAY



PERSPECTIVE

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

HOT-BED

MISS. '74

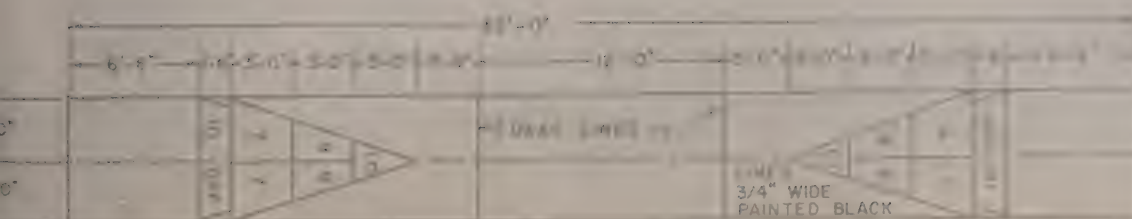
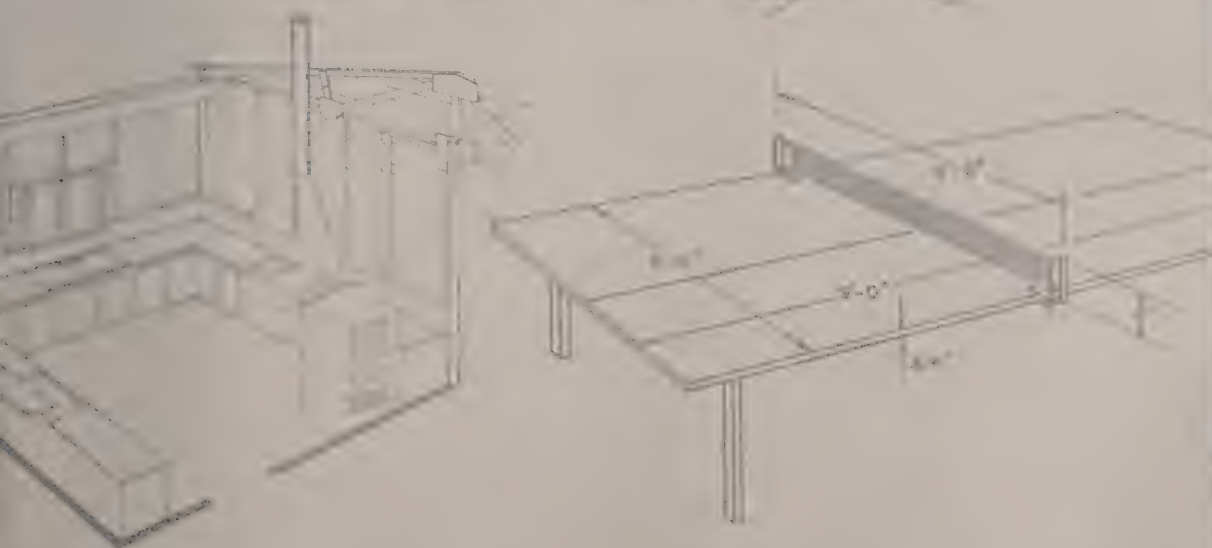
6206

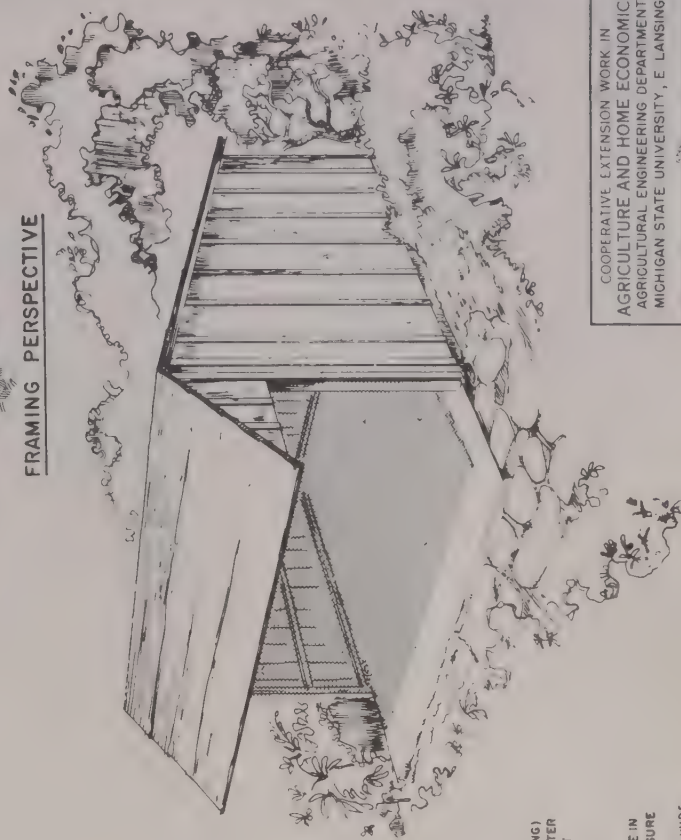
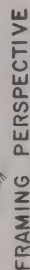
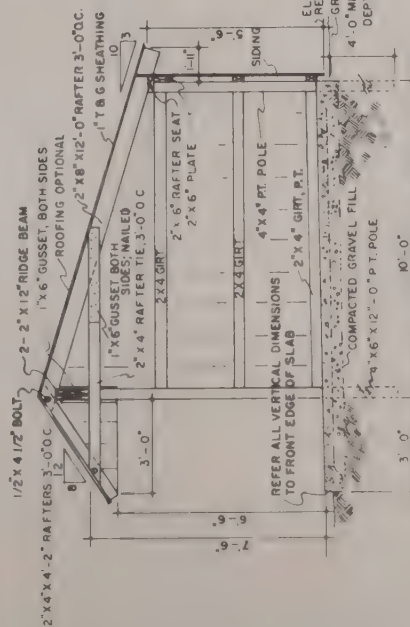
SHEET 2 OF 2



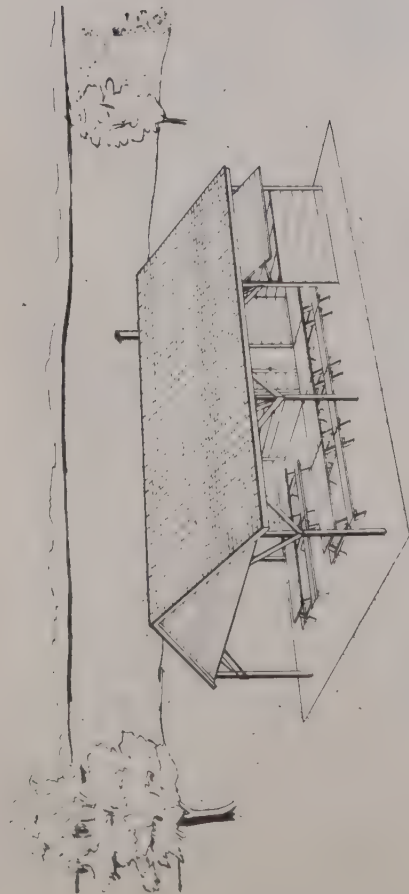
PICNIC & RECREATION

EQUIPMENT

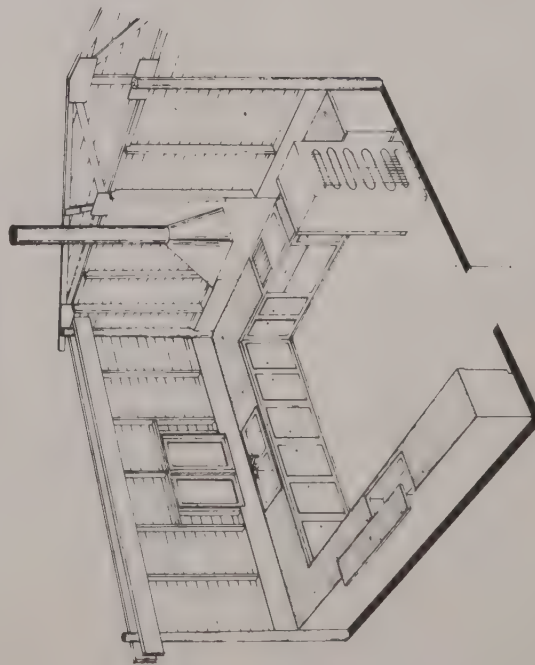




- 1 DESIGN IS BASED ON ROUGH SAWN EASTERN HEMLOCK.
- 2 CONCRETE ROOF LOAD: 300#S PER SQ FOOT.
- 3 CONCRETE FLOOR SLAB HAS THICKENED EDGE 9" DEEP
- 4 BY 6" WIDE ALONG BOTTOM SURFACE, SLOPE FLOOR
- 5 APPROX 1/4" PER FOOT FROM REAR TO OPEN FRONT
- 6 FOR DRAINAGE (PUDDLING WITHIN SHELTER FROM WIND
- 7 DRIVEN TRAIL MAY BE MINIMIZED BY INCREASING THE
- 8 SLOPE OF THE 3' FRONT MAX SIZE AGGREGATE, 6 1/2 SACKS
- 9 CRETE MIX WITH 3" C/A" TOP AGGREGATE, 6 GAL WATER / CEMENT
- 10 OF CEMENT PER CUBIC YARD, 6 GAL WATER / CEMENT
- 11 RATIO, AND 6 PERCENT ENTRAINED AIR BY VOLUME.
- 12 TAMPED EARTH OR GRAVEL FLOORS MAY BE SUBSTITUTED
- 13 FOR CONCRETE IF DESIRED.
- 14 ALL WOOD IN CONTACT WITH EARTH OR CONCRETE
- 15 SHOULD BE PRESSURE TREATED WITH PRESERVATIVE.



PERSPECTIVE



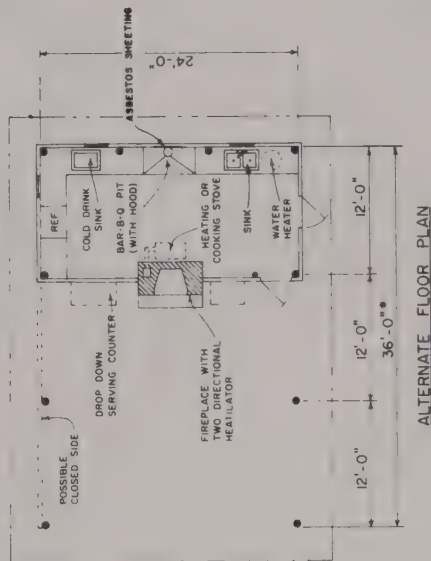
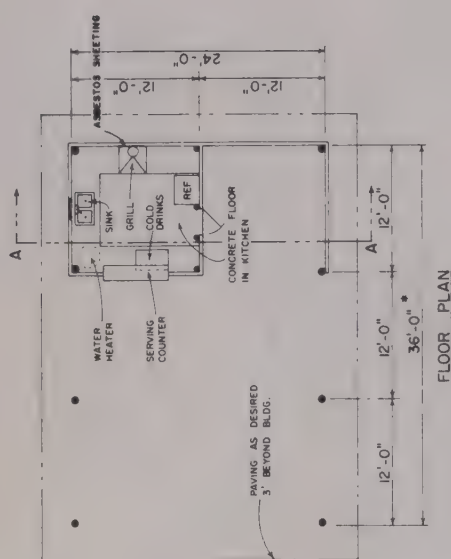
KITCHEN - CUTAWAY VIEW

NOTE

- 1 ALL WOODEN MEMBERS IN CONTACT WITH GROUND SHALL BE PRESERVATIVE PRESSURE TREATED (PPT)
- 2 SIDEWALL CONSTRUCTION DETAILS FOR HORIZONTAL SIDING ARE SHOWN, FOR VERTICAL SIDING USE TYPICAL POLE BUILDING SIDEWALL CONSTRUCTION
- 3 PROVISIONS SHOULD BE MADE FOR SHUTTING OFF WATER AND DRAINING ALL LINES IN PAVILION

DESIGNED BY:
H. R. DAVIS
E. W. FOSS
W. W. IRISH
CORNELL UNIV. PLAN NO. 830

• LENGTH OF BLDG. MAY BE EXTENDED IN 12' UNITS.

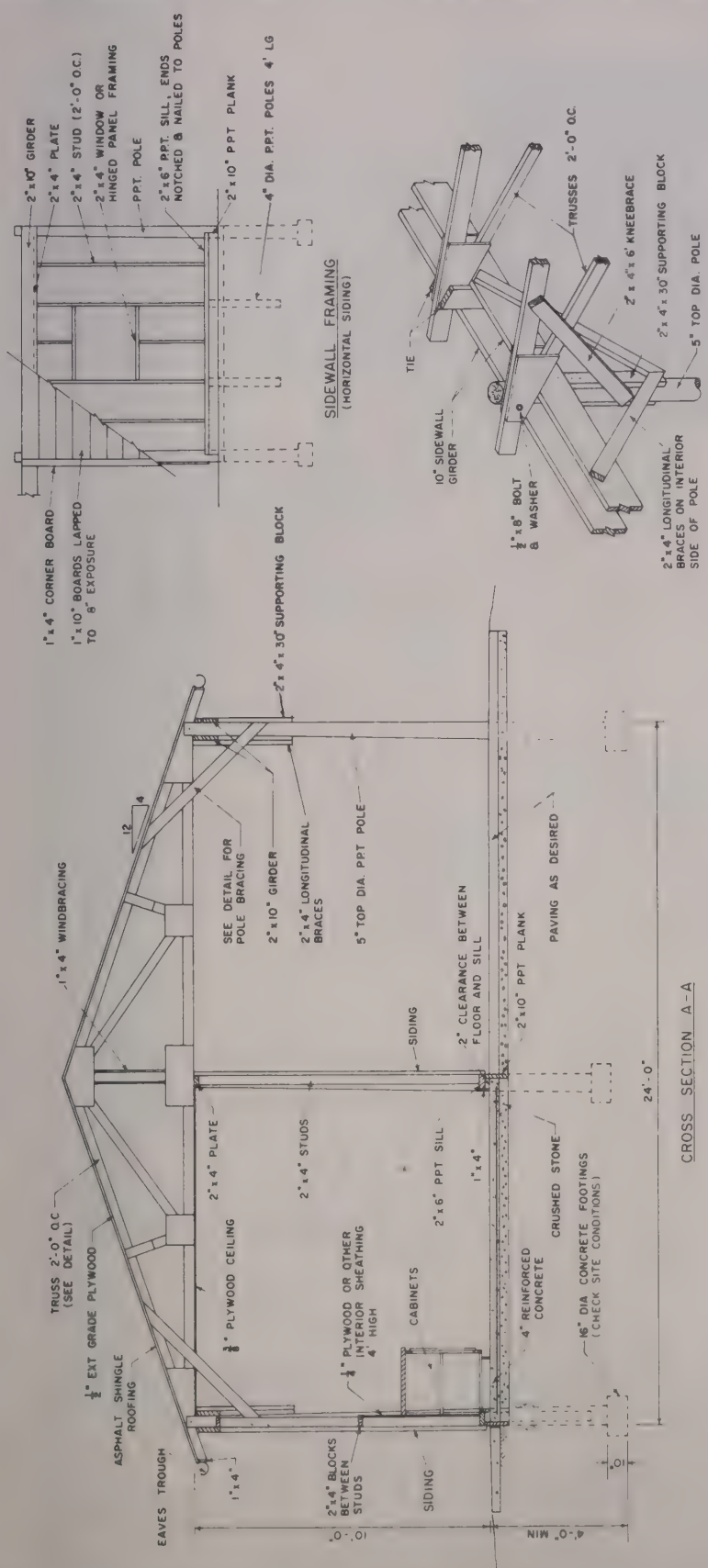


COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL ENGINEERING DEPARTMENT
MICHIGAN STATE UNIVERSITY, E. LANSING
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

PAVILION WITH KITCHEN

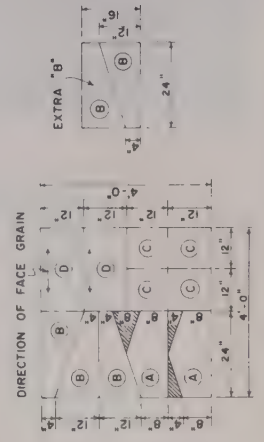
N.Y. '69 6079

FILE PLAN NO. 764 SHEET 1 OF 2



TRUSS ANCHORAGE & POLE BRACING

CROSS SECTION A-A



GUSSET PLATES - CUTTING DIAGRAM

3/4" EXTERIOR, DOUGLAS FIR PLYWOOD

NOTE

- 1 ALL GUSSET PLATES ARE GLUED & NAILED ON BOTH SIDES OF TRUSS. USE RESORCINOL GLUE & 6d BOX NAILS
- 2 TRUSS DESIGNED FOR LOADS OF 30 PSF AT 2'-0" O.C
- 3 ALL LUMBER SHALL BE STRESS GRADED TO PROVIDE 1500 PSI FIBER STRESS IN BENDING & 1350 PSI IN COMPRESSION

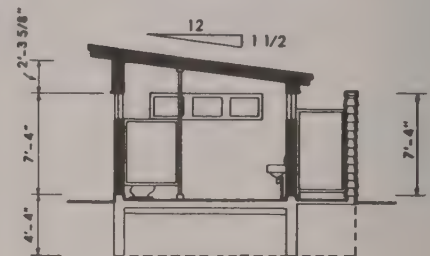
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS AGRICULTURAL ENGINEERING DEPARTMENT MICHIGAN STATE UNIVERSITY, E. LANSING AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING			
PAVILION WITH KITCHEN			
N.Y.	69	6079	SHEET 2 OF 2
FILE PLAN NO. 764			



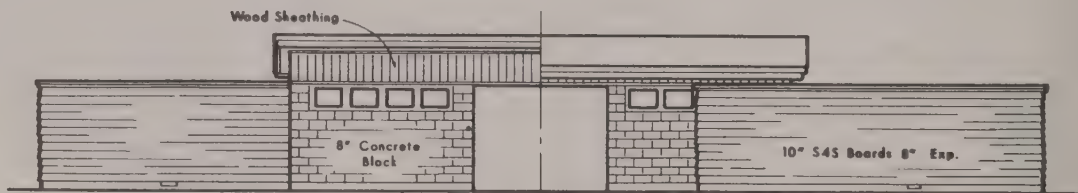
A practical solution to the problem of providing economical changing facilities for bathers. Note that the toilet areas are under cover, while the changing areas are left open to be dried by sunlight. A course of precast concrete louvre blocks along the bottom on both sides will further aid in keeping air circulating inside. The over-all architectural lines are pleasing, and the building lends itself to placement at pools as well as at natural-type bathing areas.



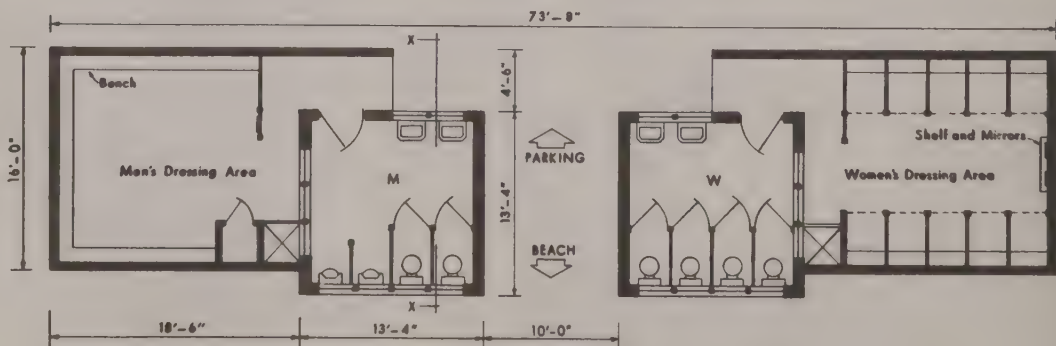
SIDE ELEVATION



SECTION X-X



HALF FRONT and REAR ELEVATION



FLOOR PLAN

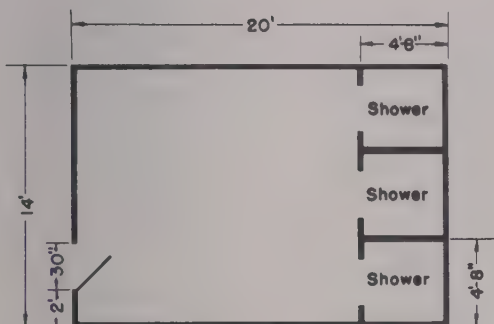
SCS - 905
7-63

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

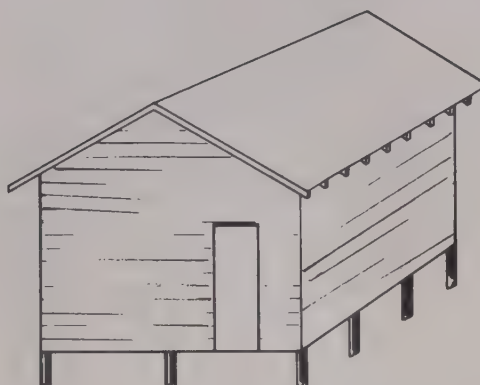
BATH HOUSE

TWO ROOMS WITH TOILETS

FROM DESIGN VOLUMES OF THE PARK PRACTICE PROGRAM
NATIONAL CONFERENCE ON STATE PARKS
DESIGN SHEET NO. R-4700



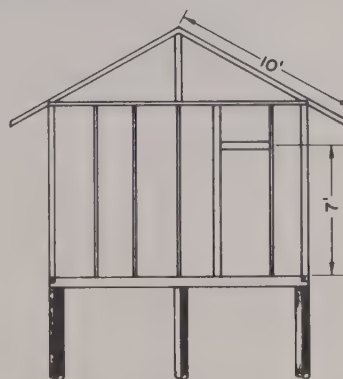
Floor Plan



NOTE: Space Joists, Studding and Rafters 30" on Centers.



Side Elevation

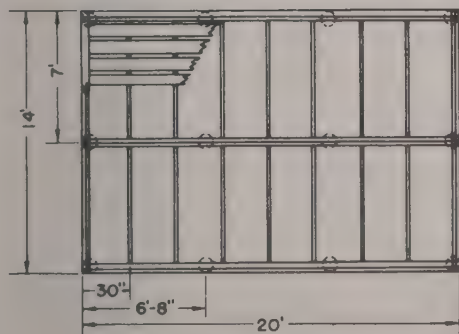


End Elevation

BILL OF MATERIALS

12	8" x 8'	Cypress Piles
6	2" x 6" x 20'	Sills
12	2" x 6" x 14'	Cross Beams
4	4" x 4" x 10'	Studding
22	2" x 4" x 10'	Studding
2	2" x 4" x 20'	Plates
2	2" x 4" x 14'	Plates
18	2" x 4" x 10'	Rafters
500	Square Feet	Roof Sheathing
900	Square Feet	8" Siding
100	Square Feet	1 1/2" x 2 1/2" x 10' Strips
300	Square Feet	1" Flooring
400	Square Feet	Roofing
		Nails

Note: Shower fixtures not shown.



Foundation Plan

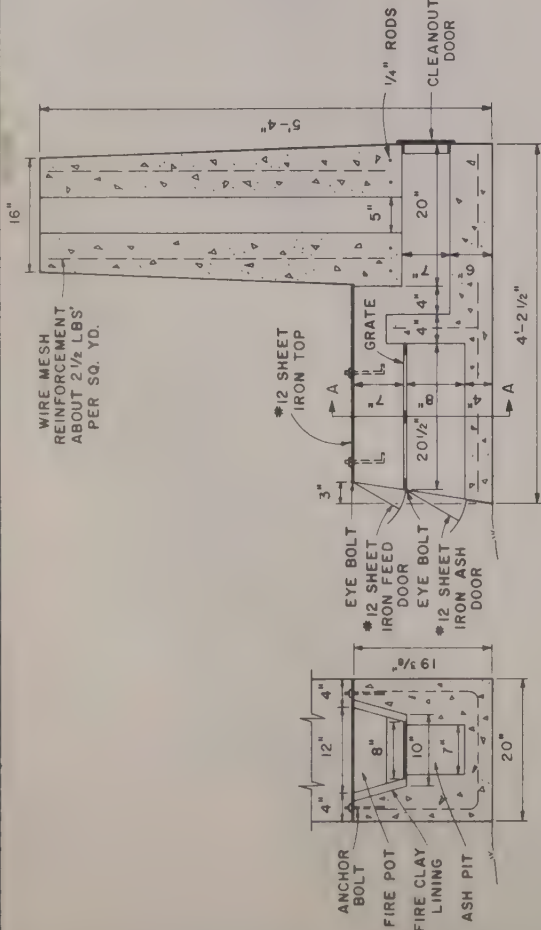
SCS-904
7-63

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

BATH HOUSE

SINGLE ROOM WITH SHOWERS

FROM ORIGINAL DESIGN BY
NORTH CAROLINA
DEPARTMENT OF CONSERVATION AND DEVELOPMENT



SECTION A-A

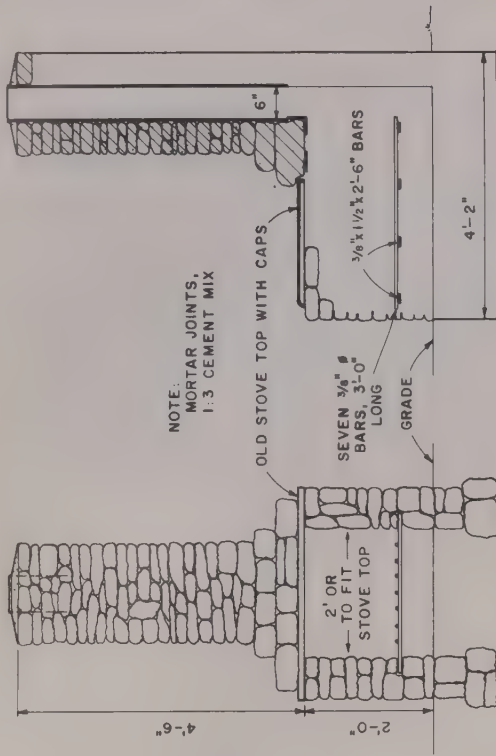
LONGITUDINAL SECTION

PLAN NO. 1 CONCRETE STOVE

FRONT VIEW

LONGITUDINAL SECTION

PLAN NO. 3 STONE STOVE



NOTE:
MORTAR JOINTS,
1:3 CEMENT MIX

SEVEN 3/8" ϕ
BARS, 3'-0"
LONG

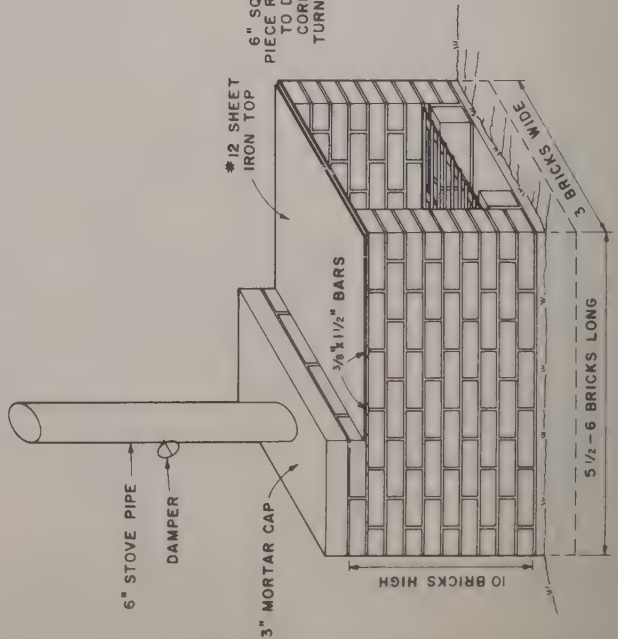
OLD STOVE TOP WITH CAPS

GRADE

3/8" $\times$ 1/2" $\times$ 2'-6"

4'-2"

6"



NOTE:
SHEET METAL DOOR WITH REVOLVING DAMPER
USE SAME SIZE AND SPACING OF OPENINGS
IN BOTH DAMPER AND DOOR.
3/8" MORTAR JOINTS.

PARTIAL SECTION

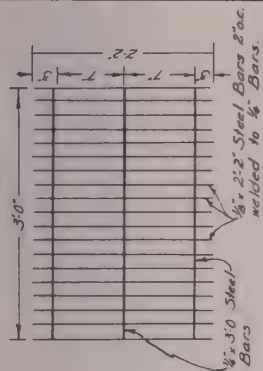
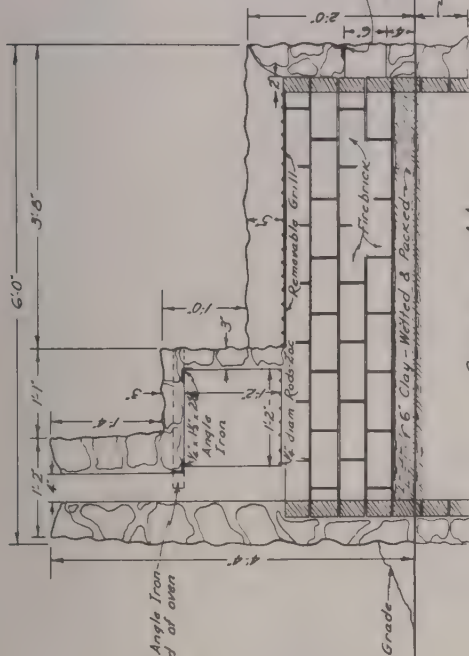
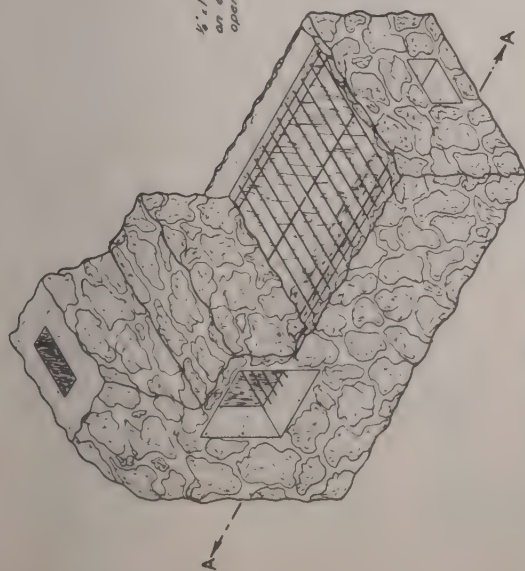
DOOR FOR
BRICK STOVE

ISOMETRIC

PLAN NO. 2 BRICK STOVE

BASED ON: UNIV. OF KY. PLAN NO. II.712-13

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS			
AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING			
CAMP STOVES			
USDA	'76	6259	SHEET 1 OF 1



SCALE: 1" = 1'-0"

At least 1'0" below ground line.

Ground Line

Grade

Oblique View

NOTE: Line inside of firebox with firebricks.

BILL OF MATERIALS

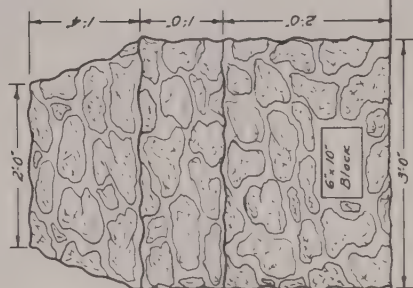
- 8 pcs. 1/2" x 2'-2" Steel Rods
- 19 pcs. 1/2" x 2'-2" Steel Rods
- 3 pcs. 1/2" x 3'-0" Steel Rods
- 2 pcs. 1/2" x 1'-8" x 2'-2" x 1'-8" Angle Iron
- 2 pcs. 1/2" x 1'-8" x 2'-2" x 3'-0" Angle Iron
- 1 pc. 1/2" x 1'-8" x 2'-2" x 1'-6" Angle Iron
- 8 cu. ft. Clay

FOR BRICK CONSTRUCTION

- 124 Firebricks
- 525 Common Bricks
- 8.0 cu. ft. Mortar

FOR RUBBLE STONE CONSTRUCTION

- 124 Firebricks
- 1.2 cu. yds. Rubble or Native Stone
- 15.0 cu. ft. Mortar



Cooperative Extension Work in Agriculture and Home Economics
Texas A. & M. College and U.S. Department of Agriculture Cooperating
G. G. Gibson, Director, College Station, Texas

OUTDOOR FURNACE WITH OVEN

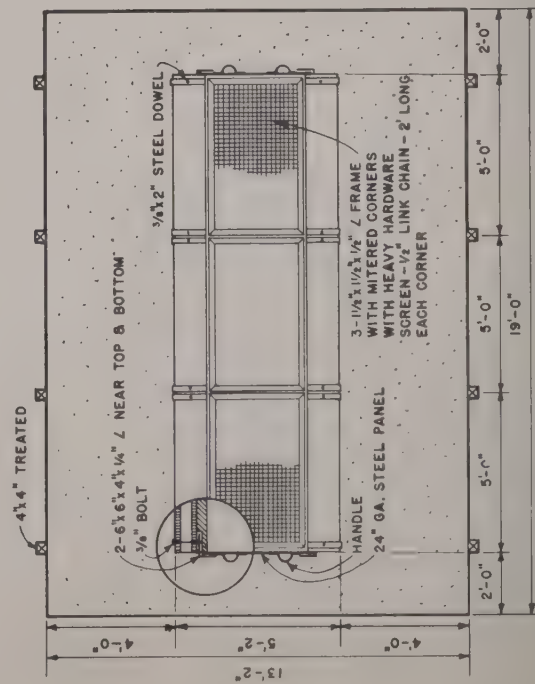
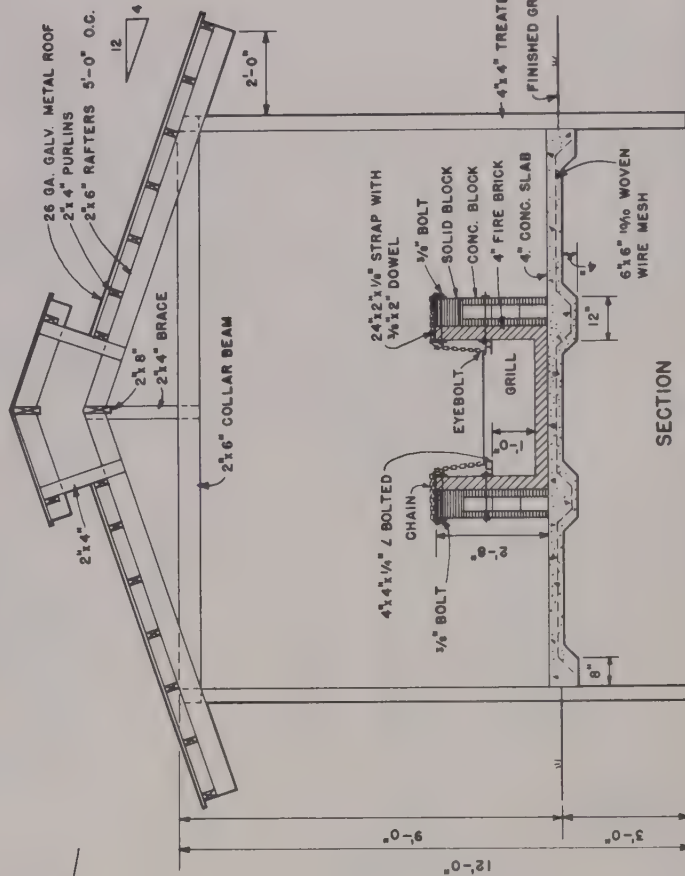
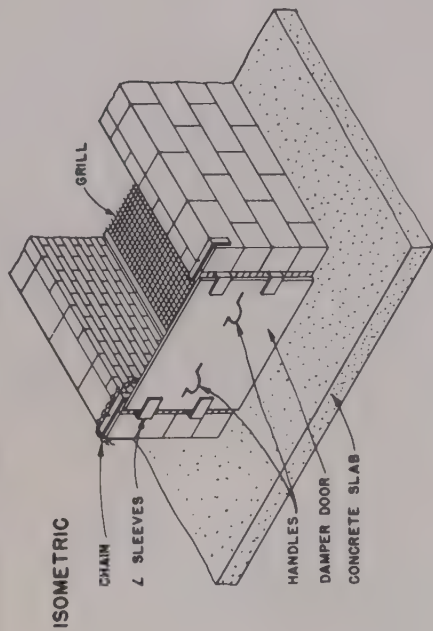
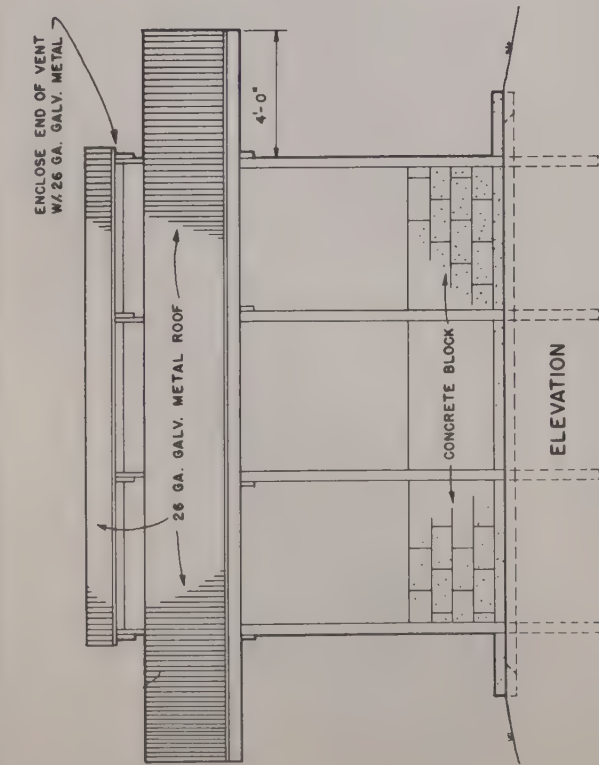
Drawn by WSA

Traced by RAS

Aug 1949

1 Sheet

Serial No. 357

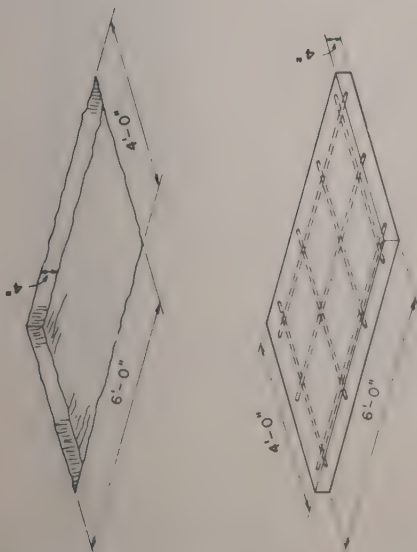


COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NORTH CAROLINA
EXT. BIOL. AGR. ENGINEERING
N.C. STATE UNIV., AT RALEIGH, N.C.
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

SHELTERED BAR-B-O-PIT

FLA. '97 EX 6020 SHEET 1 OF 1

BASED ON FLA. PLAN 1065



REINFORCED CONCRETE SLAB

BILL OF MATERIALS

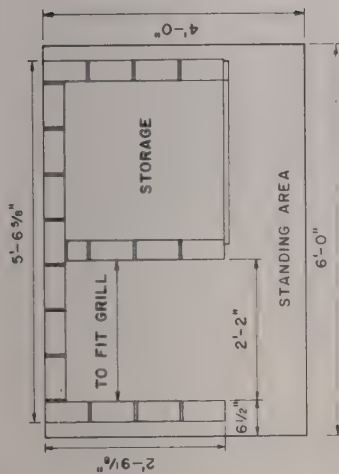
FOUNDATION MIX-1 2 1/4 3
CEMENT 2 SACKS
SAND 4 2/3 CU. FT.
GRAVEL 7 1/2 CU. FT.
STEEL RODS 4 PCS. 3'-10 1/8" Ø
3 PCS. 5'-10 1/8" 3/8" Ø

BRICK. 360 COMMON
MORTAR MIX-1 3
CEMENT 1 SACK
SAND 3 CU. FT.

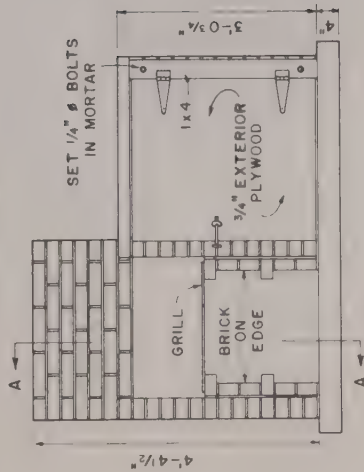
HARDWARE
2 BOLTS 3/2 1/4" Ø
2 HINGES 6"
1 HOOK, DOOR
1 GRILL

LUMBER.
1 PC. 1x4x3'-0"
1 PC. 3/4" EXT. PLYWOOD 2'-6x2'-10"

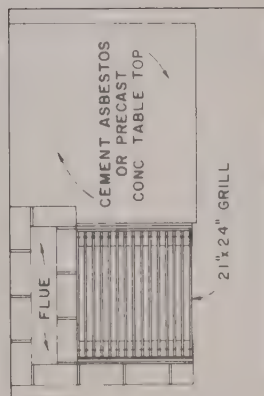
NOTE
ONE 3x3x1/2x2'-8" STEEL ANGLE
FOR FLUE. CONSULT LOCAL BUILDING
CODE AUTHORITIES BEFORE STARTING
CONSTRUCTION.



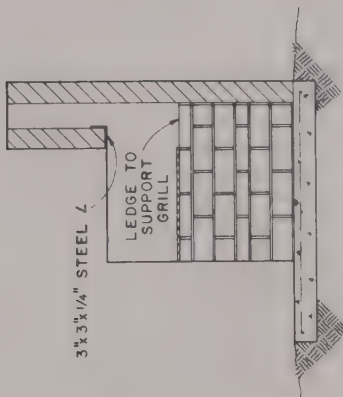
GROUND PLAN



FRONT ELEVATION



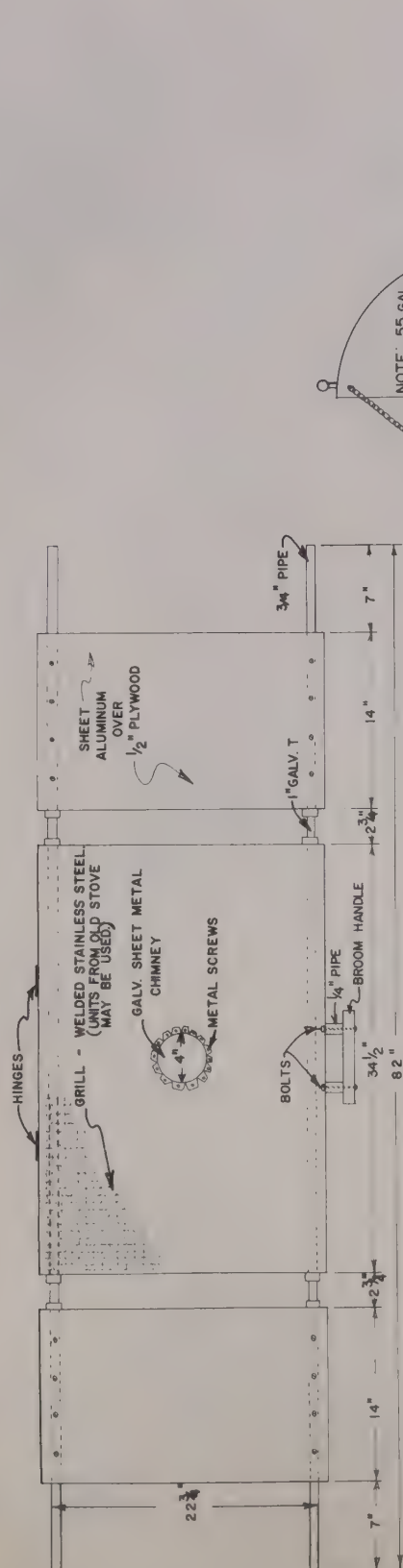
PLAN AT WORKING LEVEL



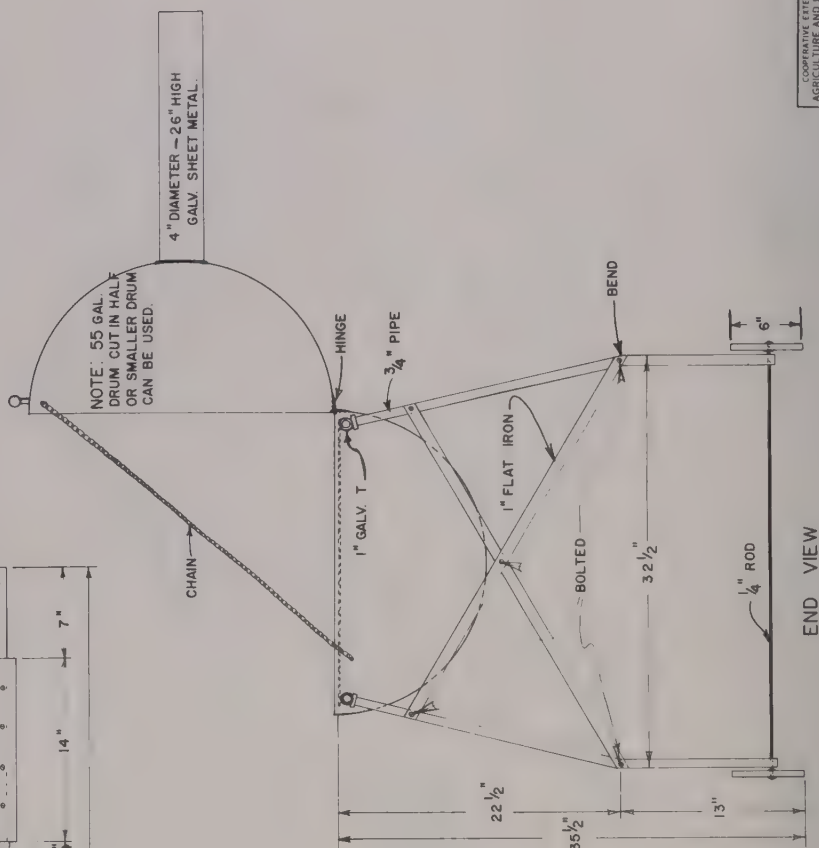
SECTION A-A

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS	
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING AND	
BARBECUE PIT	
USDA '76	6258 SHEET 1 OF 1

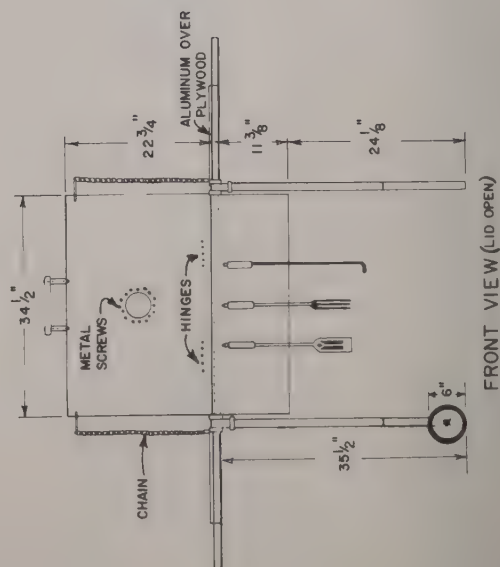
BASED ON: TEXAS A&M UNIV. PLAN NO. 392



PLAN VIEW



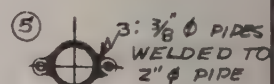
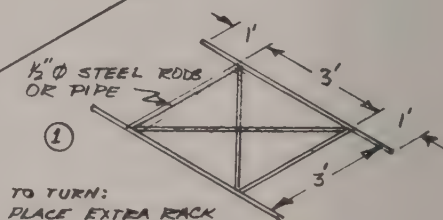
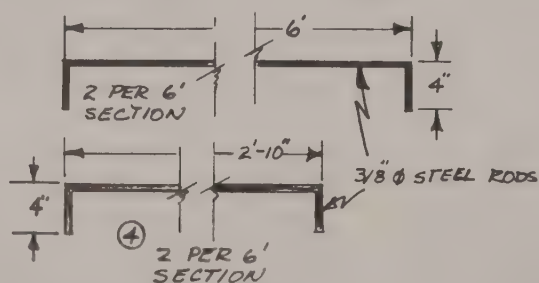
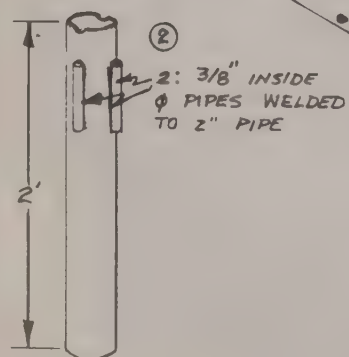
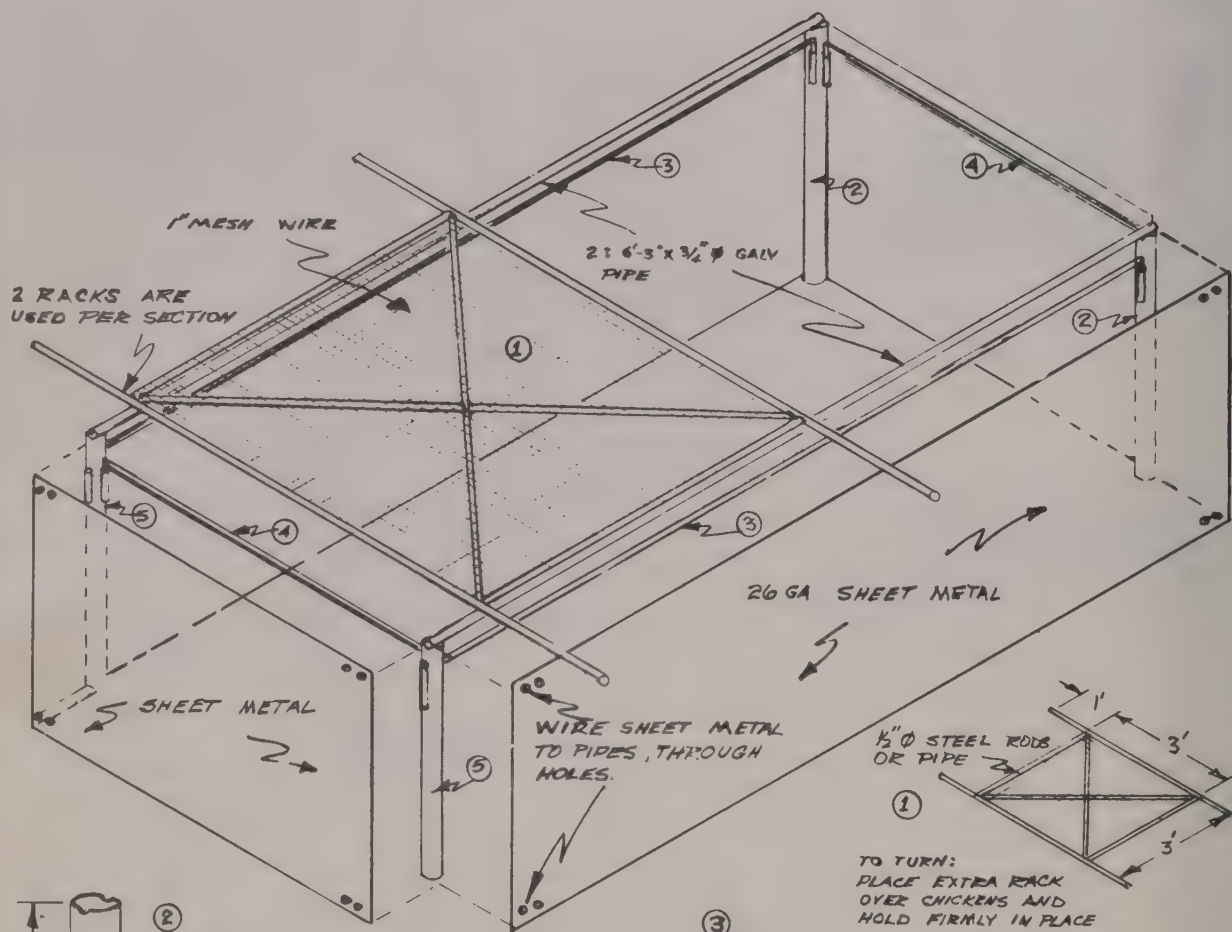
END VIEW



FRONT VIEW (LID OPEN)

NOTE: 55 GAL. DRUM CUT IN HALF OR SMALLER DRUM CAN BE USED.

4" DIAMETER - 26" HIGH GALV. SHEET METAL.



TOP VIEW

NOTE:

THESE BARBEQUE PITS
CAN BE USED IN SECTIONS
OF 6 FEET. IF OTHER
PITS ARE NEEDED THEY
CAN BE ADDED TO THE
END OF THE FIRST
PIT THROUGH THE USE OF
THE SPECIAL THREE
BRACKET PIPE AS SHOWN

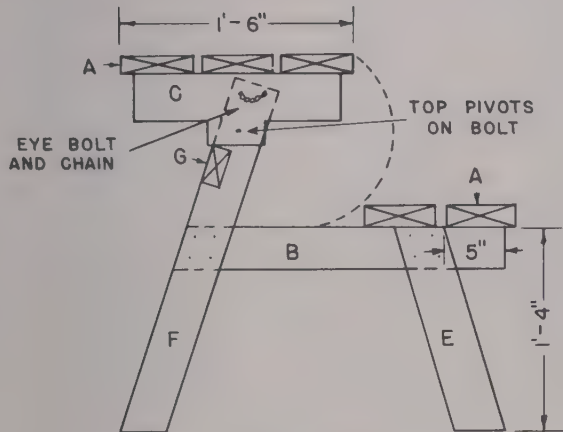
80 1/2 CHICKEN CAPACITY

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NORTH CAROLINA
NORTH CAROLINA STATE COLLEGE

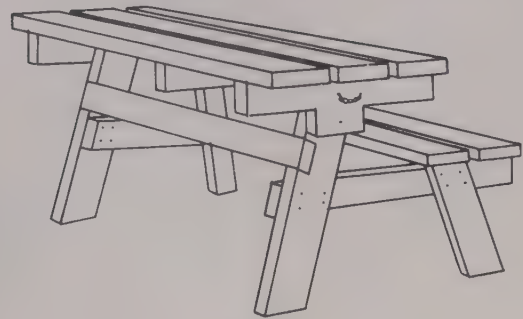
BARBEQUE PIT
80-1/2 CHICKEN CAP.

NC. NO. 2144 SHEET 1

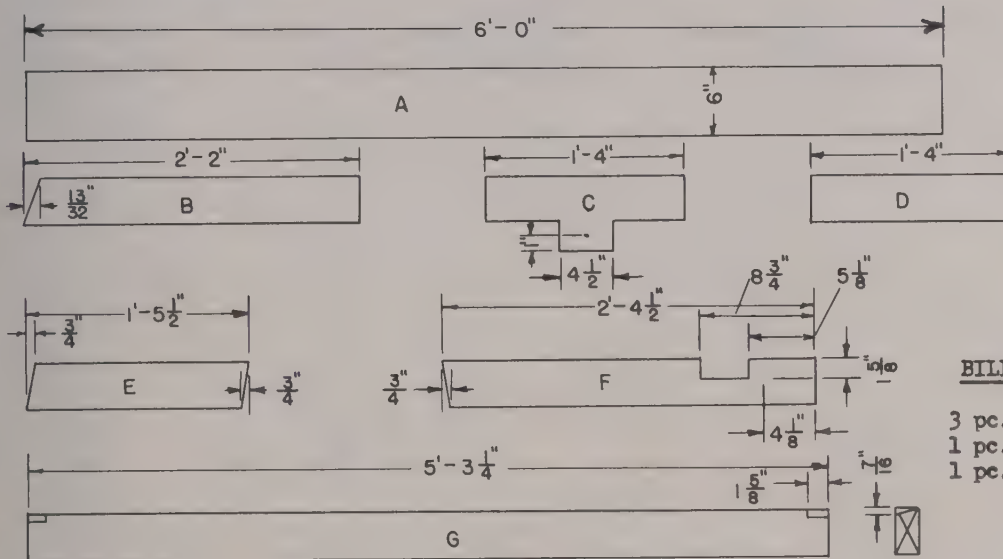
COMBINATION PICNIC TABLE AND BENCH



END VIEW



PERSPECTIVE



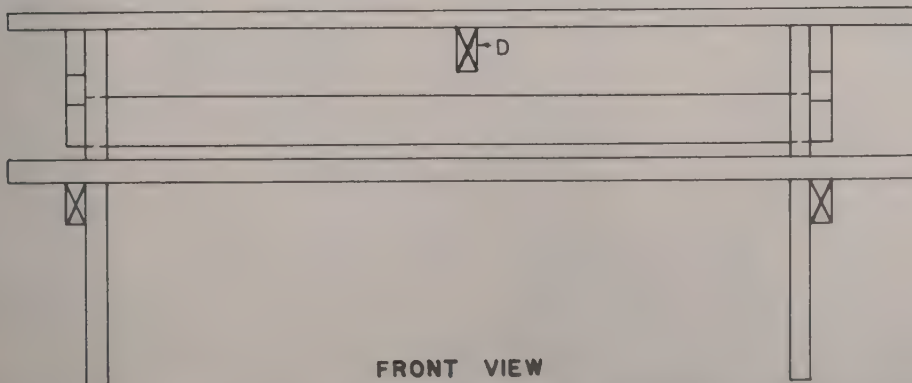
LIST OF MATERIAL

BILL OF MATERIALS

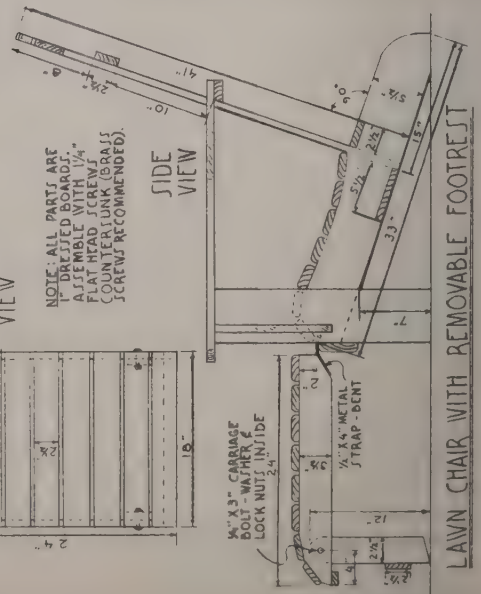
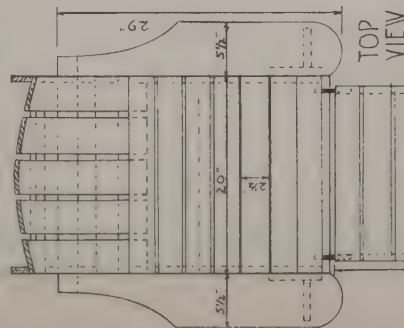
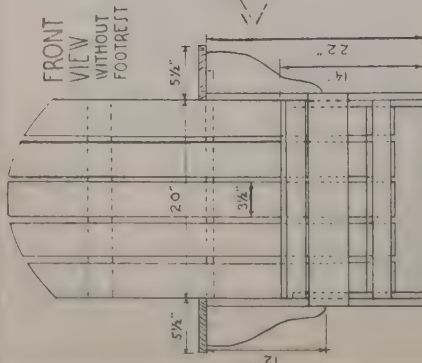
- 3 pc. 2" x 6" x 12'
- 1 pc. 2" x 4" x 10'
- 1 pc. 2" x 4" x 12'

HARDWARE

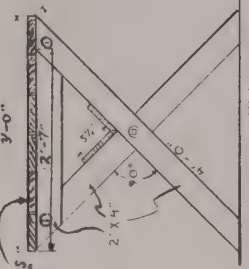
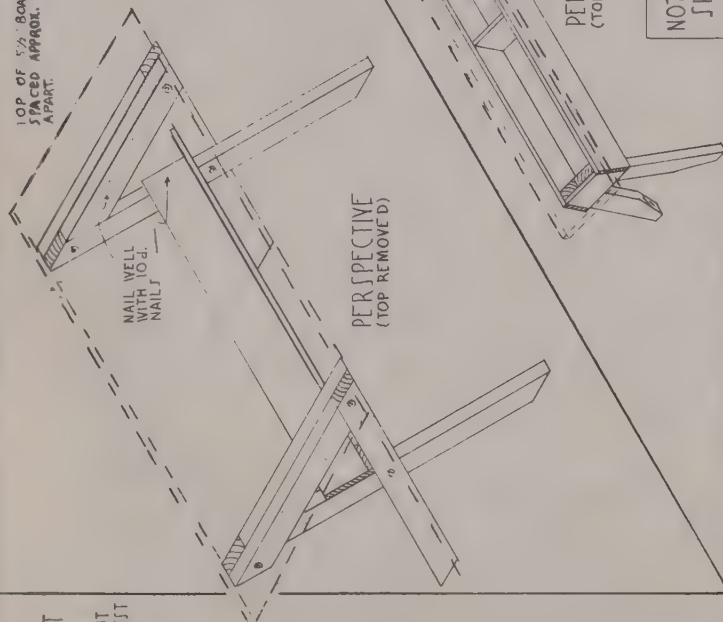
- 14 3/8" x 3 1/2" C. bolts
- 2 3/8" x 3 1/2" eye bolts
- 2 6" lengths small chain
- 30 #10 x 3" wood screws, or
- 2 lb. 12# nails



FRONT VIEW



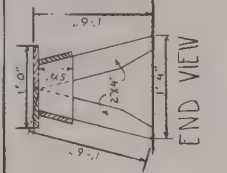
LAWN CHAIR WITH REMOVABLE FOOTREST



END VIEW

PICNIC TABLE

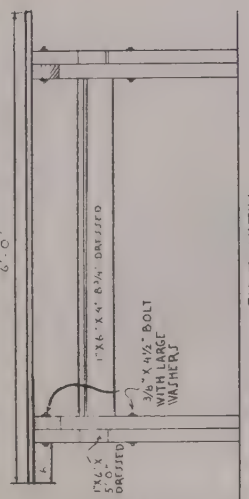
SIDE VIEW



END VIEW

PERSPECTIVE
(TOP REMOVED)

BENCH



SIDE VIEW

PICNIC TABLE

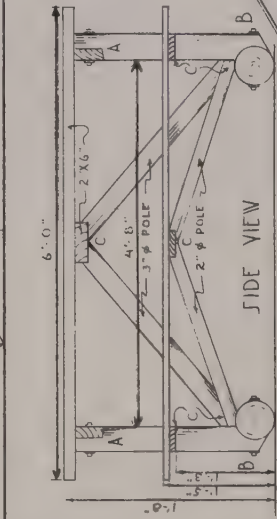


SIDE VIEW

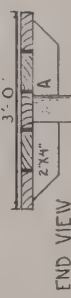
PERSPECTIVE
(TOP REMOVED)

BENCH

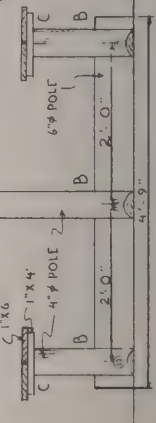
NOTE: ALL WOOD TO BE TREATED WITH PENTACHLOROPHENOL & MINERAL SPIRITS, & PAINTED OR STAINED ONE COAT BEFORE ASSEMBLING.



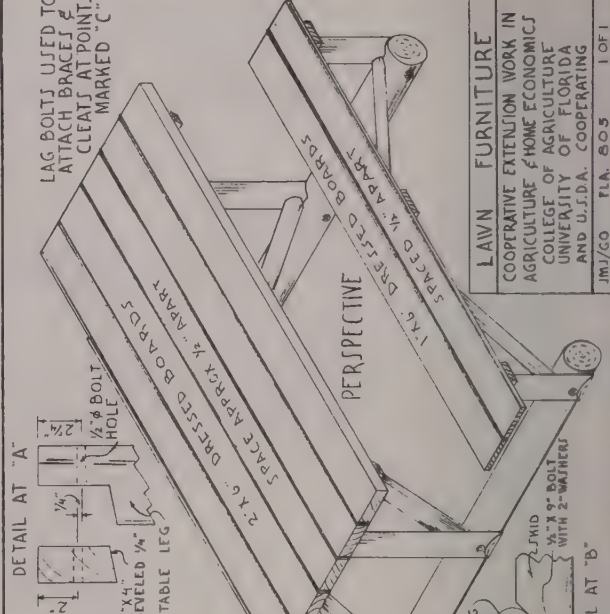
SIDE VIEW



END VIEW



PICNIC TABLE WITH ATTACHED BENCHES



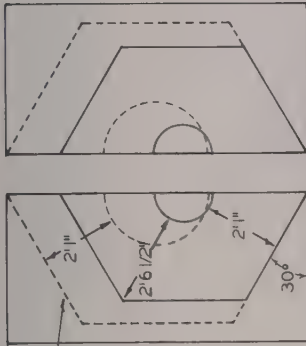
PERSPECTIVE

TABLE LEG

DETAIL AT "B"

LAWN FURNITURE
COOPERATIVE EXTENSION WORK IN
AGRICULTURE & HOME ECONOMICS
COLLEGE OF AGRICULTURE
UNIVERSITY OF FLORIDA
AND U.S.D.A. COOPERATING

JMJ/GO FLA. 805 1 OF 1



CUTTING DIAGRAM FOR TABLE TOP

NOTE THIS HOLE IS 18" IN DIA. BUT IT SHOULD BE MADE LARGE ENOUGH FOR THE TREE PLUS SPACE ENOUGH TO ALLOW FOR GROWTH OF TREE

FOR A HOLE LARGER THAN 18" ADD EXTRA LENGTH TO 1"x2" & 2"x12" IN BILL OF MATERIALS

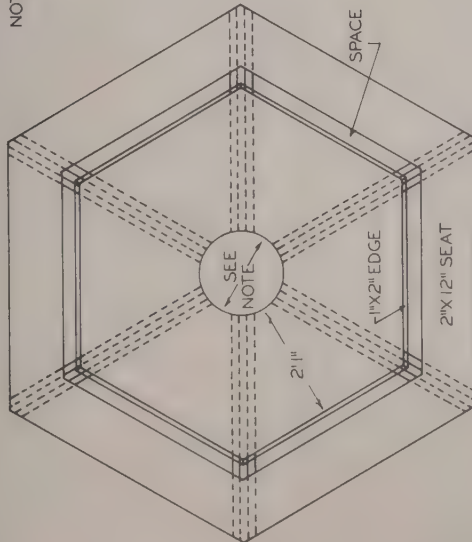


TABLE TOP
TOP VIEW

BILL OF MATERIALS

- 3 - 2"x4"x10' - TOP BRACES
- 4 - 2"x4"x12' - BOTTOM BRACES
- 2 - 2"x4"x8' - BACK LEGS
- 2 - 2"x4"x10' - FRONT LEGS
- 1 - 1'x2"x14' - EDGE OF TABLE TOP
- 1 - 1'x2"x8' - SEATS
- 3 - 2"x12"x10' - SHEETS
- 2 - SHEETS 3/4"x4"x8' PLYWOOD - TABLE TOP (EXTERIOR TYPE, A-C GRADE)
- 24 - 3/8"x6" BOLTS
- 16 - NAILS FOR BRACES & SEATS
- 8 - NAILS FOR TOP & EDGING

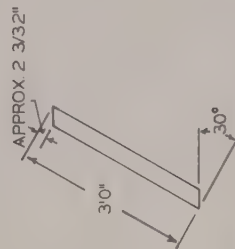
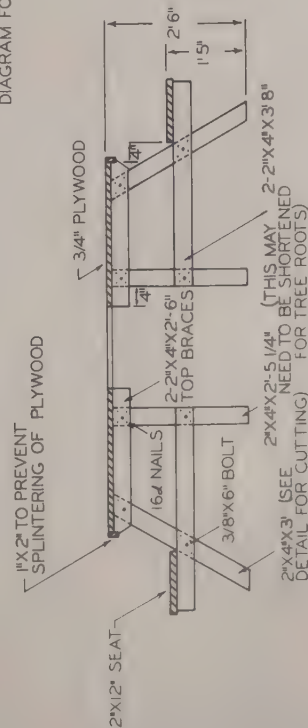


DIAGRAM FOR CUTTING LEG

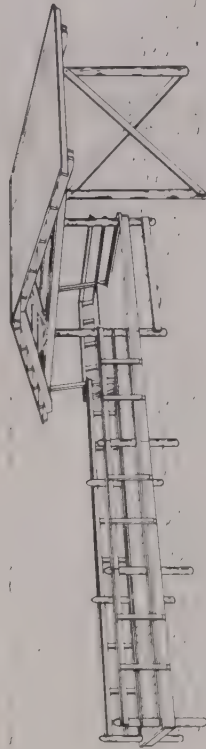


END VIEW OF LEG
& BRACES

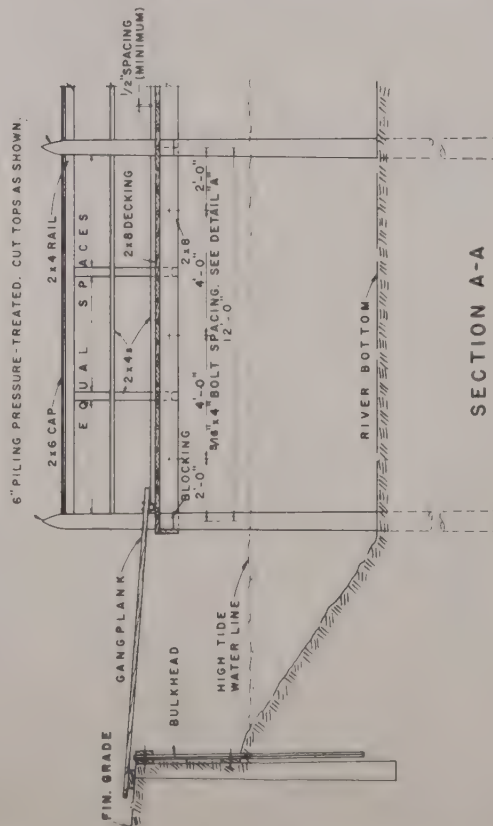


CROSS SECTIONAL VIEW

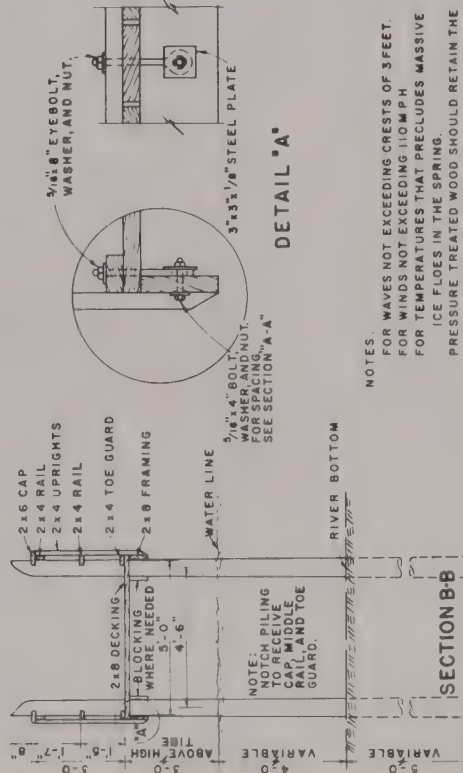
Department of Agricultural Engineering University of Missouri			
SCALE	DATE	APPROVED BY	DRAWN BY C.E.B.
	July, 1967		REVISED V.T.B.
PICNIC TABLE - To Be Built Around a Tree			DESIGN NUMBER
			A-001-C1
			Des. by: H.H. & C.E.B.



PERSPECTIVE
(BULKHEAD AND GANGPLANK NOT SHOWN)

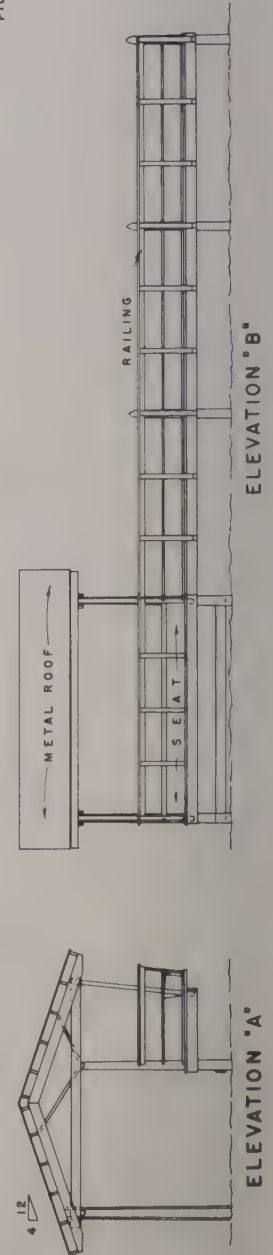


SECTION A-A



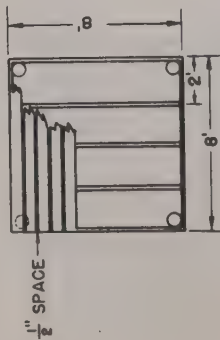
DETAIL "A"

NOTES:
FOR WAVES NOT EXCEEDING CRESTS OF 3 FEET.
FOR WINDS NOT EXCEEDING 11.0 M.P.H.
FOR TEMPERATURES THAT PRECLUDES MASSIVE
ICE FLOES IN THE SPRING.
PRESSURE TREATED WOOD SHOULD RETAIN THE
EQUIVALENT OF 8 LBS. OF CREOSOTE PER CU. FT.
ALL METAL FASTENERS TO BE GALVANIZED.
DESIGN BENDING FIBER STRESS: _____
RAFTERS _____ 1200 LBS. PER SQ. IN.
MULTIPLE MEMBERS 1400 " " "
PILING _____ 4500 " "



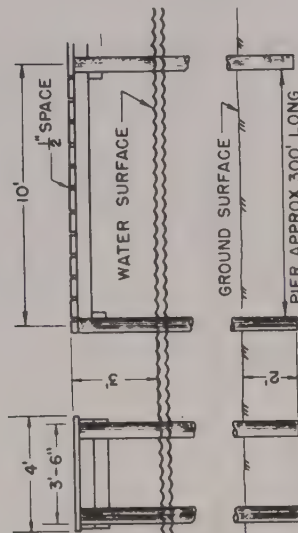
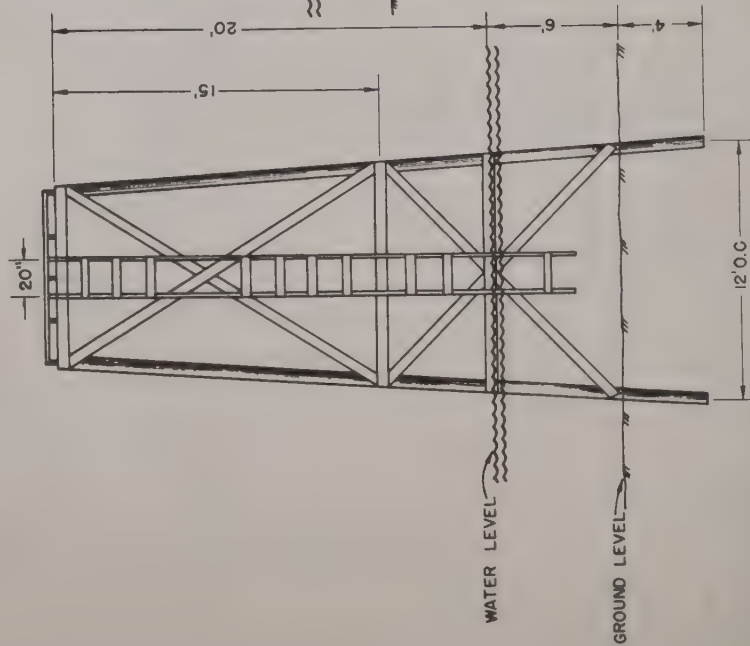
ELEVATION "B"

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF FLORIDA
UNIVERSITY OF FLORIDA
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING



BILL OF MATERIALS FOR TOWER

4 6" x 30' Cypress Piles
 22 2" x 6" x 16' Braces and Joists
 16 2" x 6" x 10' Braces
 2 2" x 4" x 24' For Ladder
 6 1" x 4" x 12' Boards
 80 Square Feet Flooring 1" x 6"
 Nails



BILL OF MATERIALS FOR PIER

30 6" x 12' Cypress Piles
 20 6" x 10' Cypress Piles
 10 6" x 8' Cypress Piles
 60 2" x 6" x 10' Beams
 16 2" x 4" x 12' Stringers
 150 1" x 8" x 12' Flooring
 Nails

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE

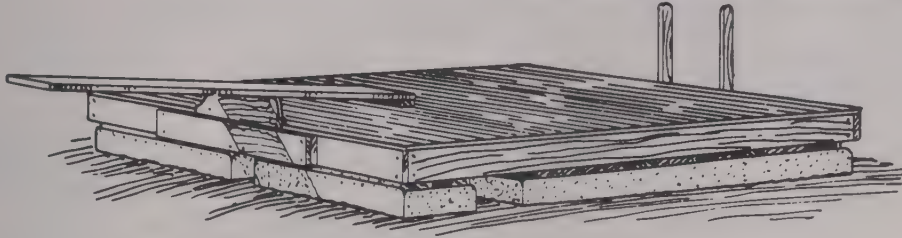
SCS 495
 7-63

DIVING TOWER AND PIER

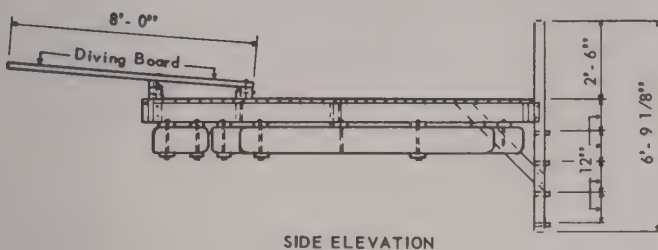
FROM ORIGINAL DESIGN BY
 NORTH CAROLINA DEPARTMENT OF CONSERVATION AND DEVELOPMENT

In recent years the word "flotation" has come to mean considerably more than lashing watertight drums beneath the object to be floated. With the advances in chemical technology has come unicellular expanded polystyrene bearing the name Styrofoam.

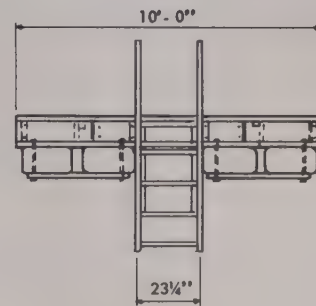
Douglas fir and redwood are recommended for decking, stringers and bracing; white oak for steps; maple for dowels. All wood should be treated with cuprinol before assembly. If creosote is used on the submerged redwood, 22 gauge galvanized sheet metal is recommended as a shield for the Styrofoam. Ladder might be painted white. All metal parts, including nails, should be hot dip galvanized.



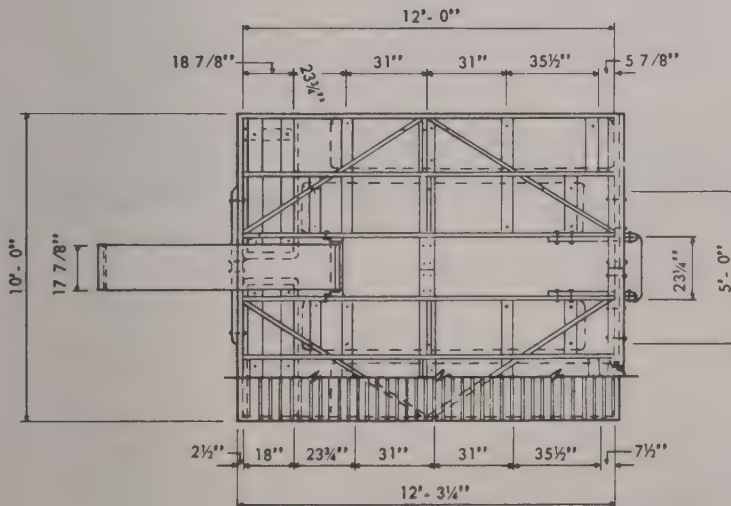
DIVING RAFT



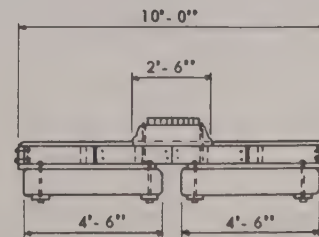
SIDE ELEVATION



REAR ELEVATION



PLAN



FRONT ELEVATION

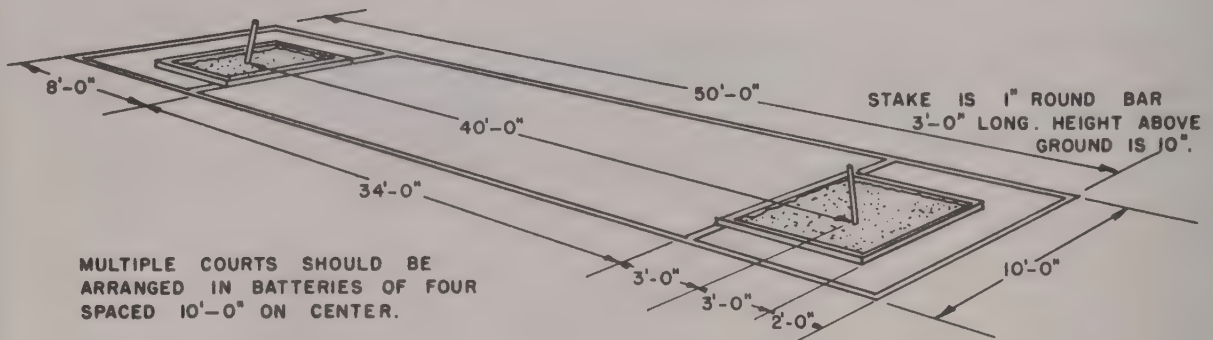
SCS-496
6-63

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

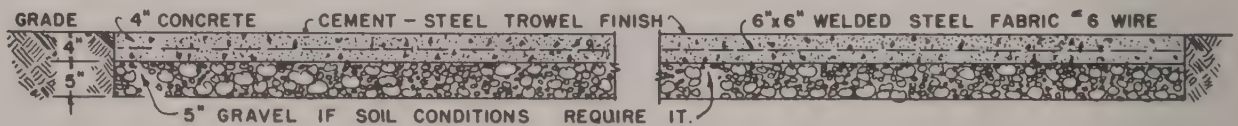
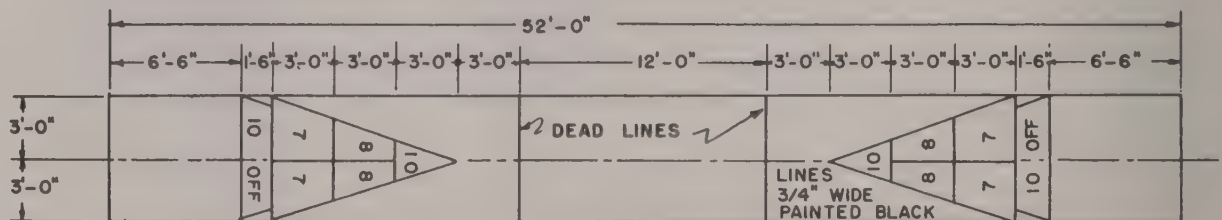
DIVING RAFT-STYROFOAM

FROM DESIGN VOLUMES OF THE PARK PRACTICE PROGRAM
NATIONAL CONFERENCE ON STATE PARKS
DESIGN SHEET NO. R-4904

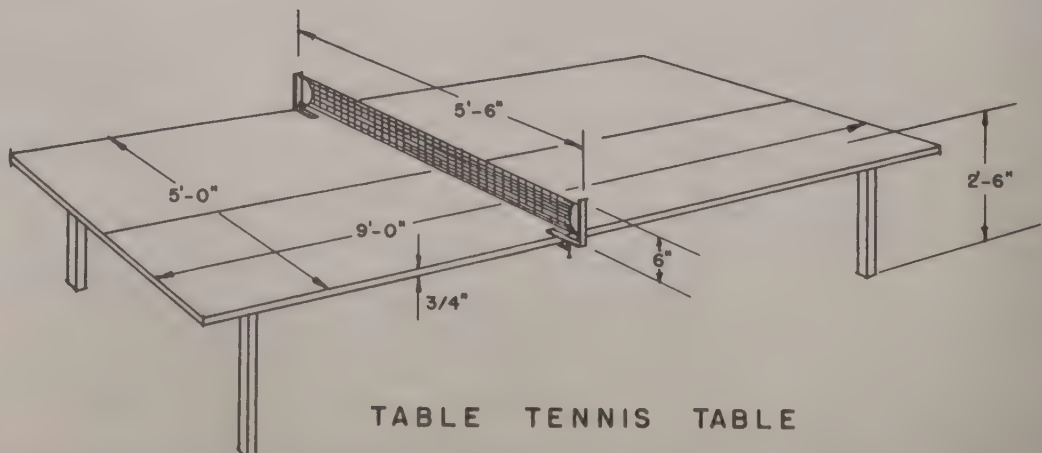
HORSESHOES, SHUFFLEBOARD AND TABLE TENNIS



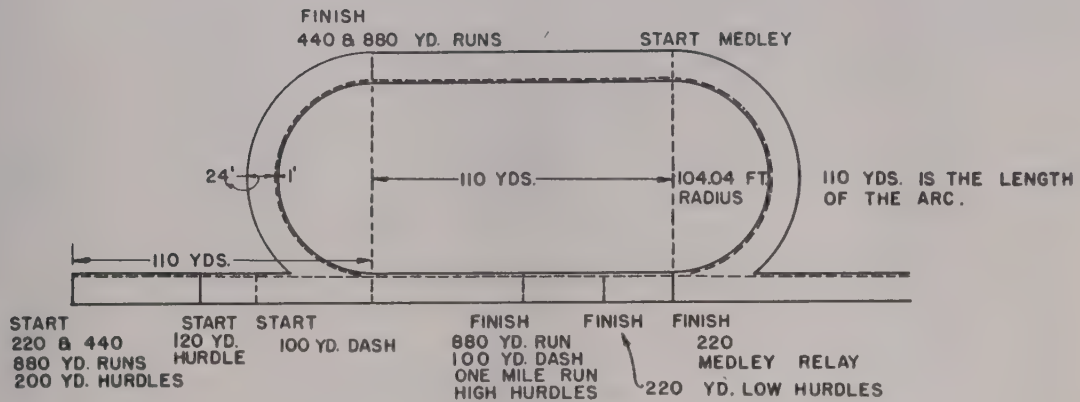
HORSESHOES



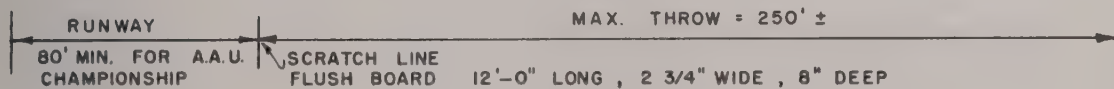
SHUFFLEBOARD



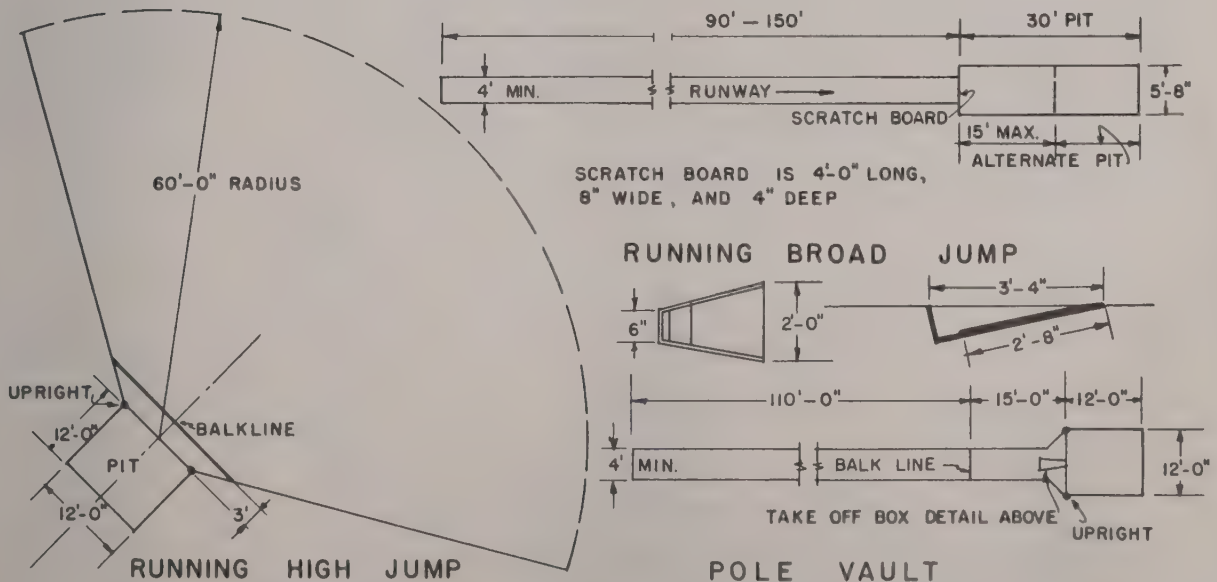
TRACK AND FIELD



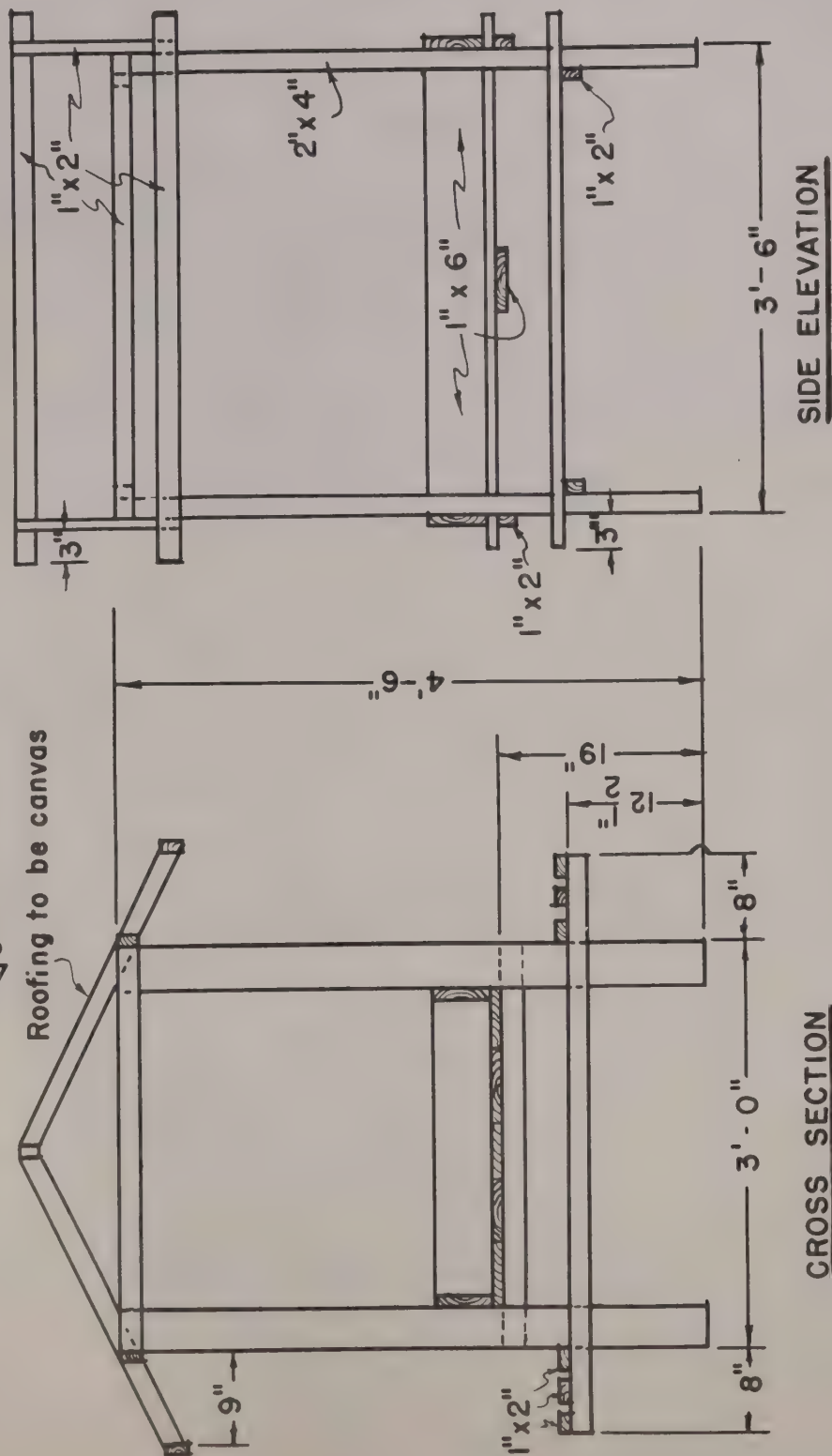
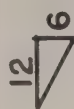
QUARTER-MILE RUNNING TRACK .

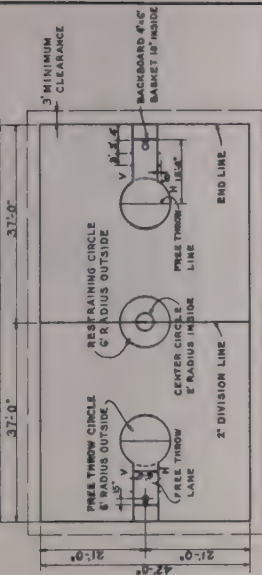
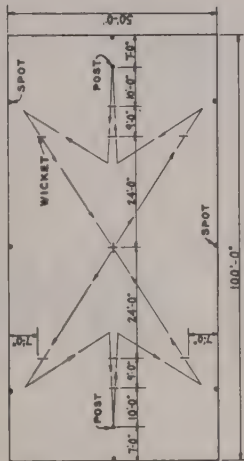
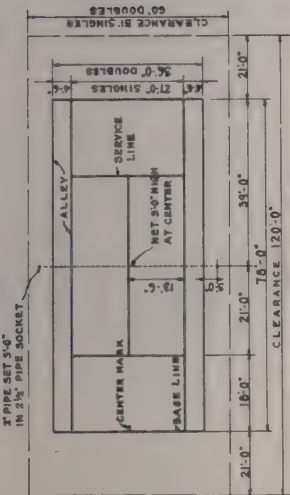
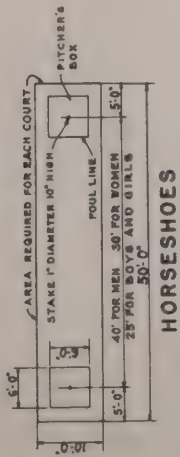
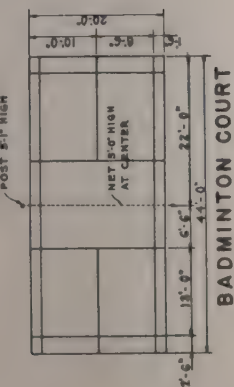


JAVELIN THROW

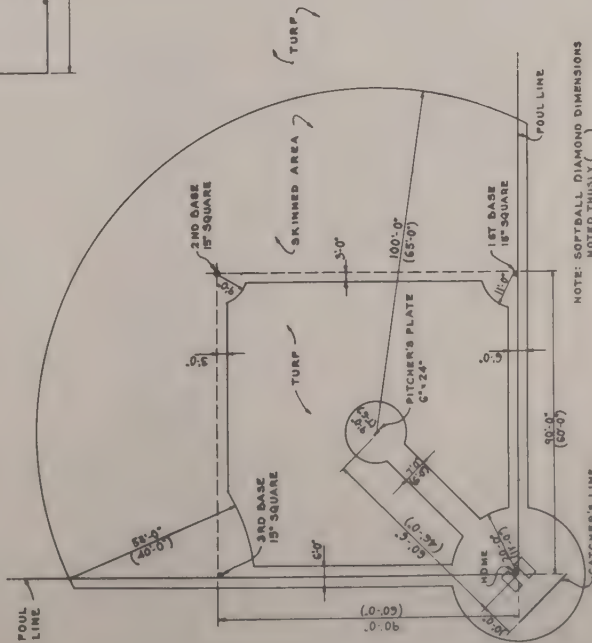
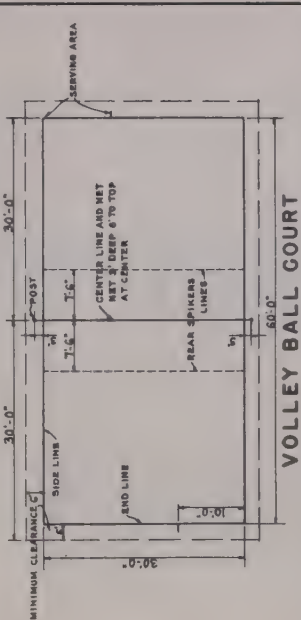


Roofing to be canvas

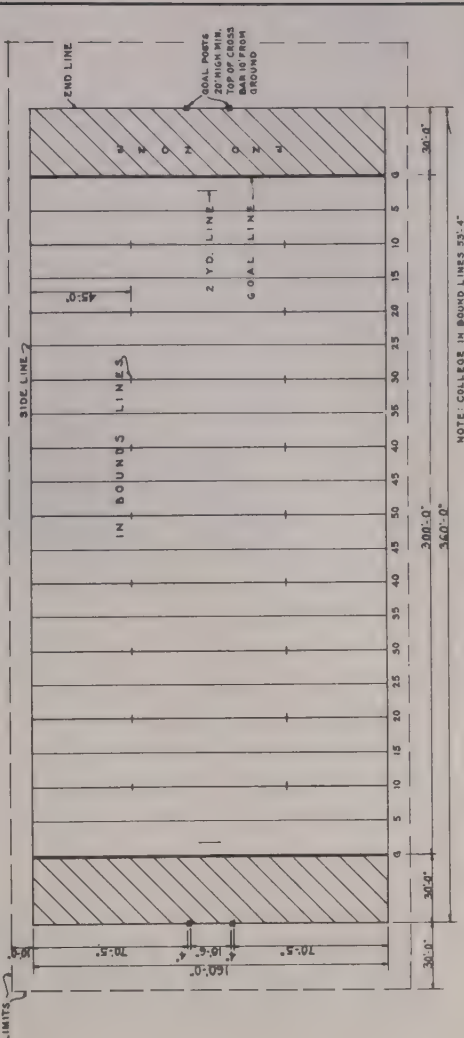




NOTE: JUNIOR HIGH SCHOOL (AS SHOWN)
AT JUNIOR HIGH SCHOOL
COLLEGE ARE 28'-4"
BASKET 10' INSIDE



NOTE: SOFTBALL DIAMOND DIMENSIONS
NOTED THUSLY ()



NOTE: COLLECT IN BOUND LINES 35'-4"

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS FLORIDA AGRICULTURAL EXTENSION SERVICE UNIVERSITY OF FLORIDA COLLEGE OF AGRICULTURE		
PLAYGROUND LAYOUTS		
U S O A	EX. 5824	SHEET 1 OF 1

BASED ON N.J. 1935 PLAN EX. 5163

5/16" x 1/4" CAR-
RIAGE BOLTS
6"
FRAME PANEL
3" x 1" STEEL STRAP
NUT TO FORM EYE
OR PIN AS SHOWN

PROCESSING

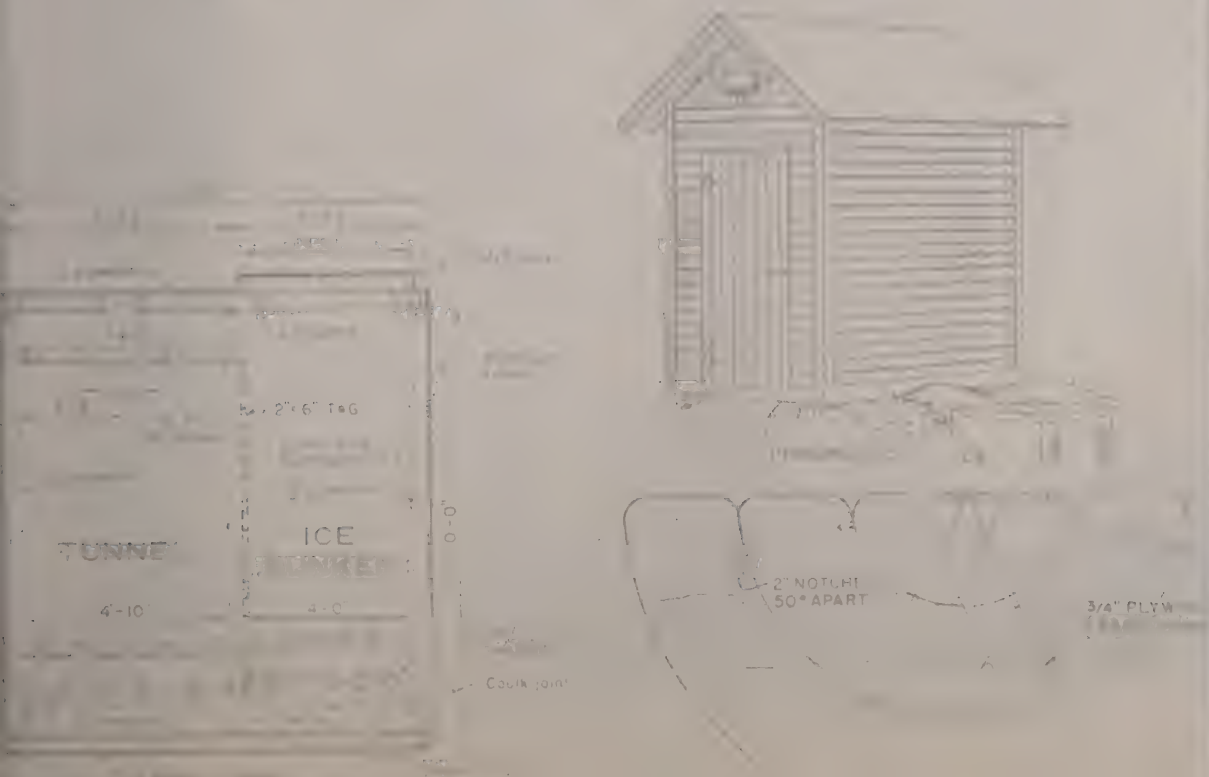
Go firm C
Sill below roof

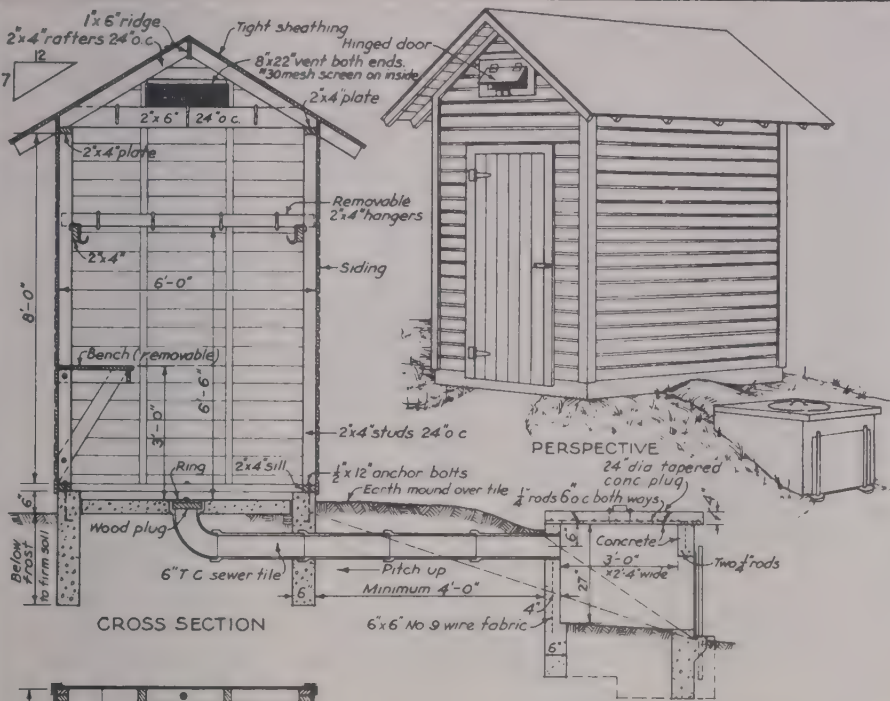
BUILDINGS

AND

ROADSIDE MARKETS

PERSPECTIVE





BILL OF MATERIALS SMOKEHOUSE

CONCRETE 1:3:5 mix

10 bags cement, 1 cu. yd. sand, 1 1/2 cu. yds. gravel.

LUMBER

- 3 pieces 2" x 6" x 6'-0" cross ties.
- 3 " 2" x 4" x 12'-0" header, bench and hangers.
- 12 " 2" x 4" x 10'-0" sills, studs, and rafters.
- 23 " 2" x 4" x 8'-0" " " plates, and hangers.
- 2 " 1" x 10" x 8'-0" bench and vent doors.
- 2 " 1" x 6" x 10'-0" ridge and trim.
- 2 " 1" x 6" x 7'-0" door battens.
- 6 " 1" x 4" x 10'-0" corner boards and trim.
- 6 " 1" x 4" x 8'-0" trim.
- 6 " 1" x 6" x 7'-0" T & G boards for door

275 ft. B.M. 6" drop siding.

120 ft. B.M. roof sheathing.

Roofing or asphalt shingles to cover 100 sq. ft. roof area

MISCELLANEOUS

- 7- 1/2" x 12" anchor bolts, with nuts and washers.
- 1 pair 8" Tee hinges, 1 safety hasp.
- 2-pair 2" x 2" hinges for vent doors.
- 1-piece metal flashing-6"x40"
- 4 lin. ft. #30-mesh wire screen-10" wide.
- 4 lengths 6" T.C. sewer pipe, 1-6" 90° T.C. elbow.
- Nails, hanging hooks, and paint not included.

FIREBOX

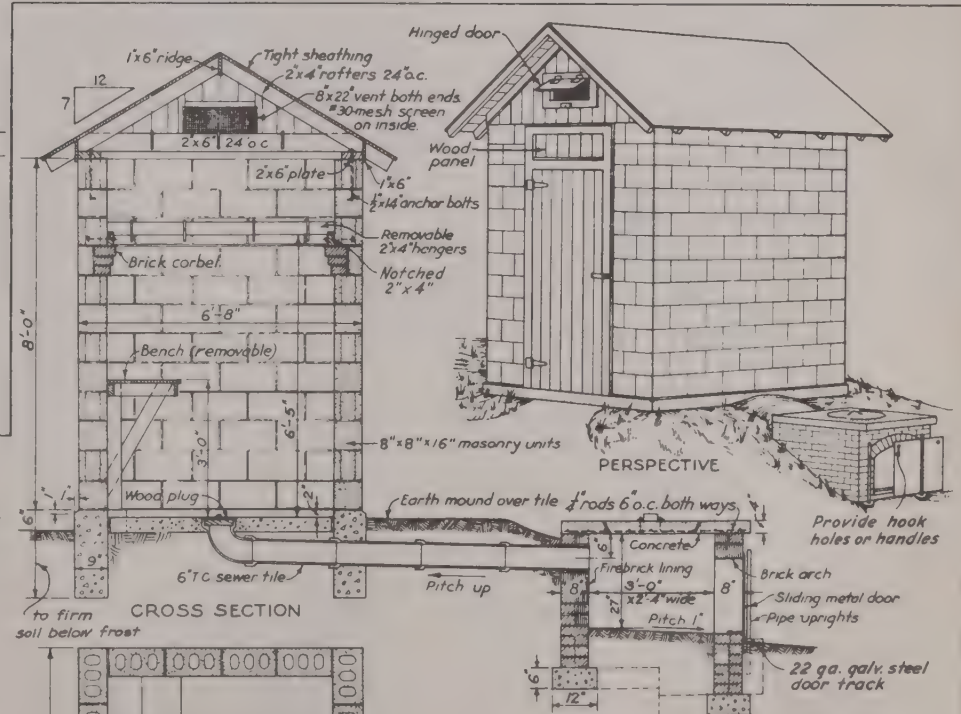
CONCRETE 1:2:3 mix.

6 bags cement, 1/2 cu. yd. sand, 1/2 cu. yd. broken hard brick, gravel or stone, (brick more heat resistant)

MISCELLANEOUS

- 10 lin. ft. 6"x6" No. 9 wire fabric 30" wide.
- 6 pieces 1/2" steel rods 42" long.
- 10 " 1/2" " 32" "
- 2 " 1/2" pipe 36" long.
- 1-piece 24"x32" metal, sliding door

A



BILL OF MATERIALS SMOKEHOUSE

CONCRETE AND MORTAR.

Concrete 1:3:5 mix. Mortar 1:3 + 10% lime.

14 bags cement, 1/2 cu. yds. sand, 2 cu. yds. gravel.

65 lbs. hydrated lime.

142 8" x 8" x 16" smooth face masonry units.

12 8" x 4" x 16" " " " "

2 8" x 4" x 8" " " " "

14 8" x 8" x 8" " " half " "

52 8" x 8" x 16" " " corner " "

12 8" x 8" x 16" " " jamb " "

12 8" x 8" x 8" " " half " "

100 common brick

LUMBER

4 pieces 2" x 6" x 8'-0" plates and door jambs.

6 " 2" x 6" x 7'-0" " cross ties.

9 " 2" x 4" x 10'-0" rafters, gable-end studs.

7 " 2" x 4" x 6'-0" bench and removable hangers.

53 " 2" x 3" x 8'-0" door casing.

9 " 1" x 6" x 10'-0" " battens, ridge, trim.

9 " 1" x 4" x 10'-0" trim.

1 " 1" x 12" x 6'-0" bench.

1 " 1" x 10" x 10'-0" " and vent doors.

120 ft. B.M. roof sheathing. 56 ft. B.M. 1 1/2" x 16" door, gables.

Roofing or asphalt shingles to cover 100 sq. ft. roof area

MISCELLANEOUS

8- 1/2" x 14" anchor bolts, 1 pr. 8" Tee hinges, 1 pr. 2" x 2" hinges.

6"x36" metal flashing, 4 lin. ft. #30-mesh screen 10" wide.

Nails, hanging hooks, and paint not included

FIREBOX

7 bags cement, 1/2 cu. yd. sand, 1/2 cu. yd. gravel.

450 common brick, 90 firebrick.

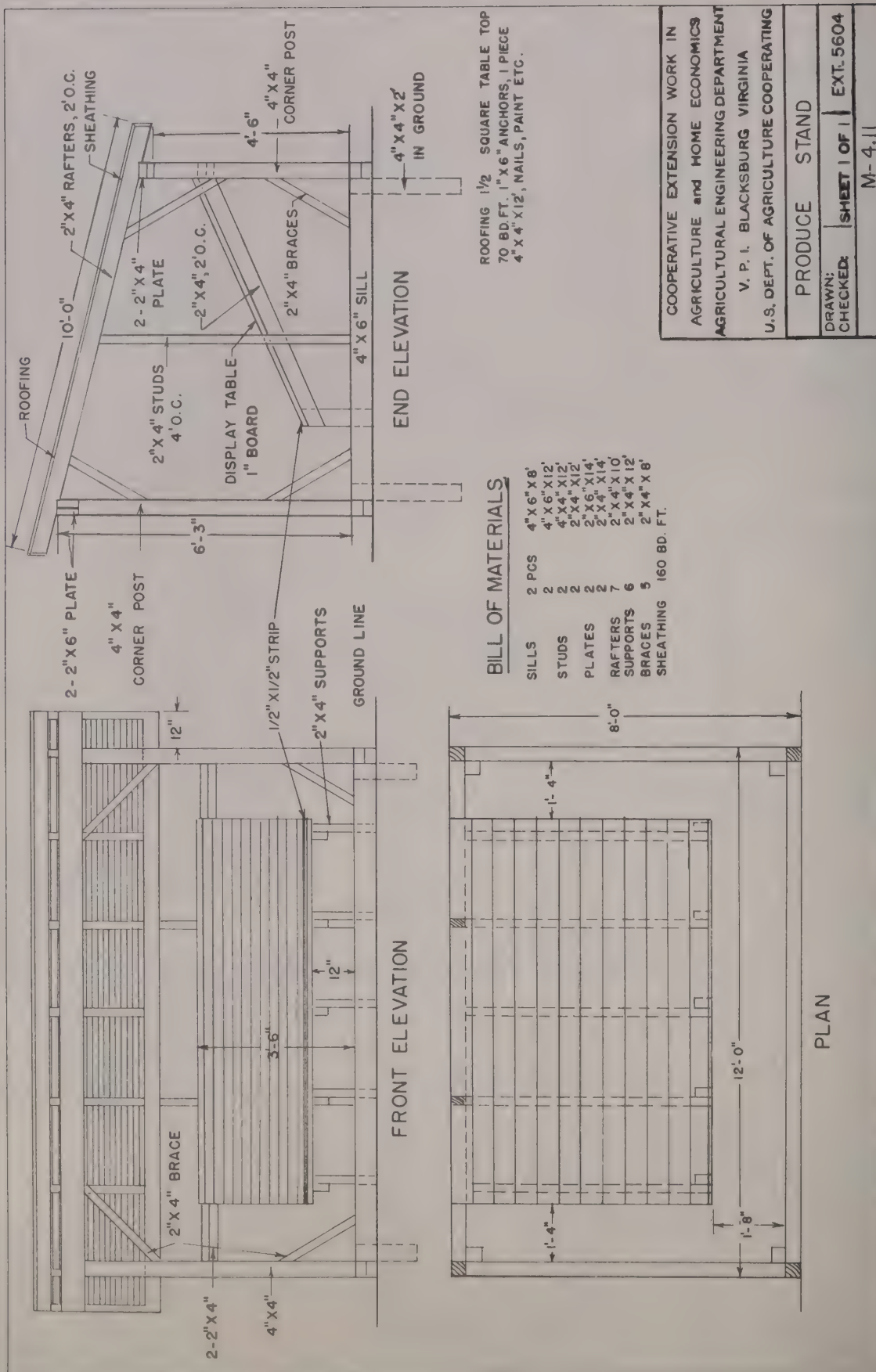
9- 1/2" steel rods 40" long. 6- 1/2" steel rods 48" long.

2 pieces 1/2" pipe 36" long.

1 metal sliding door 24"x32".

B

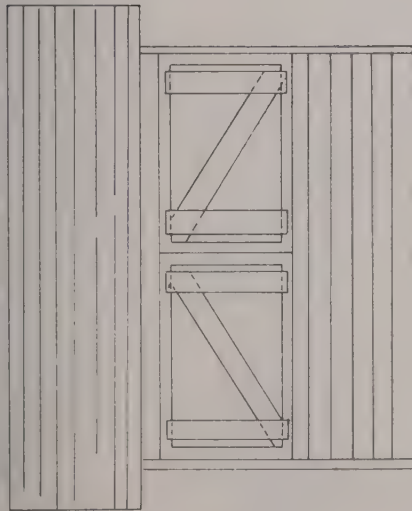
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS		
STATE OF FLORIDA		
UNIVERSITY OF FLORIDA		
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
SMOKE HOUSE		
USDA	EX. 5695	SHEET 1 OF 1
EXT. AGR. ENGINEER - GAINESVILLE, FLORIDA		



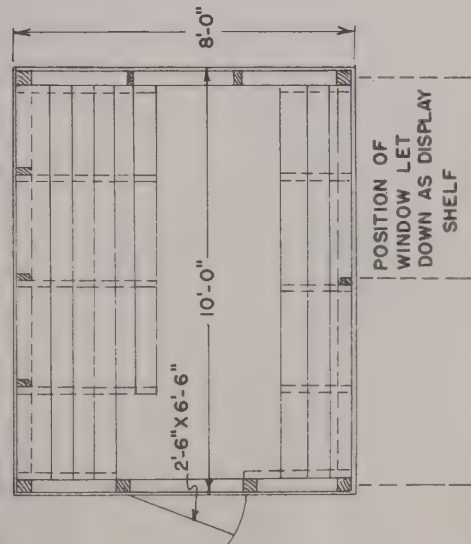
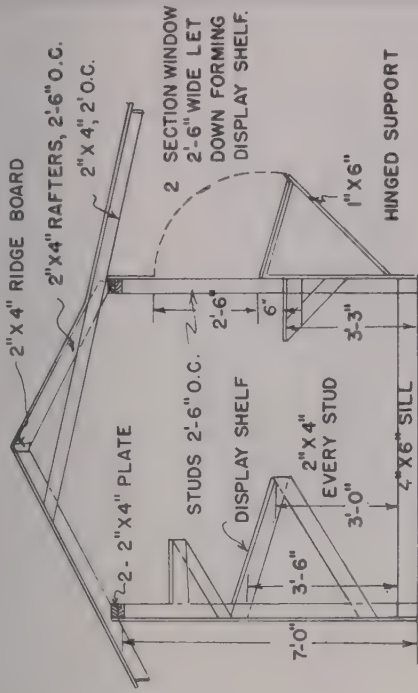
BILL OF MATERIALS

SILLS	2PCS	4" X 6" X 10"
STUDS	8 -	4" X 6" X 8'
PLATES	4 -	2" X 4" X 14'
RAFTERS	4 -	2" X 4" X 10'
DISPLAY SHELF SUPPORTS	11 -	2" X 4" X 12'
	2	2" X 4" X 10"
WEATHER BOARDS	6	2" X 4" X 12'
SHEATHING	200	260 BD. FT.
ROOFING	1.8 SQUARES	
DOOR	1 -	2'-6" X 6'-6"
WINDOW SHUTTERS (MATCHED BOARDS)	60 BD. FT.	
BATTENS	1' X 6" - 60	
HARDWARE		
NAILS		
PAINT		

FRONT ELEVATION

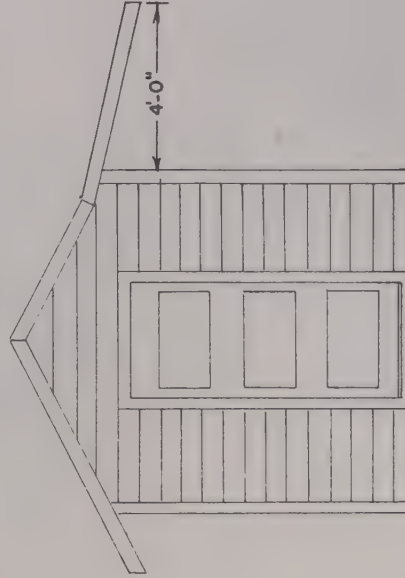


SECTION

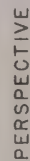
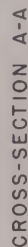
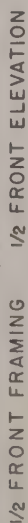


PLAN

SIDE ELEVATION



SMALL ROADSIDE MARKET
SHEET 1 OF 1
M-4.12

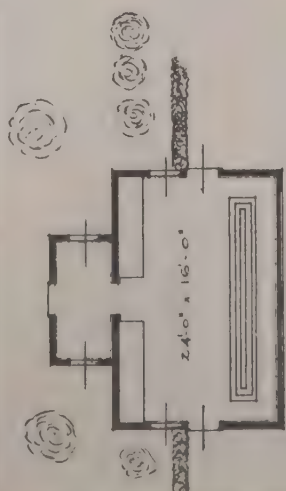


4. Price board to be held in closed position with hooks and eyes located at each end of board.
5. Metal straps may be used to secure four rafters to the ribbon in place of the 2"x2" cleats shown.

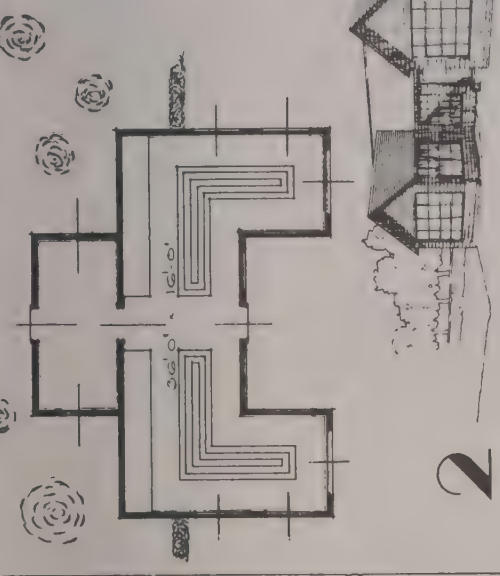
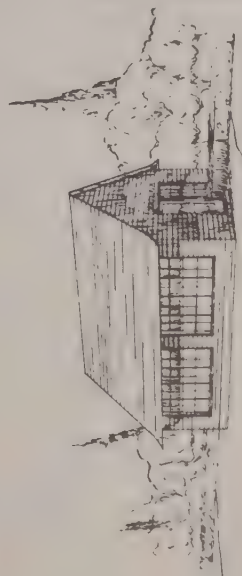
6. Chains to be secured to counter with eye-bolts and to sides of rafters with hooks. Provide additional hooks on the same rafters toward rear wall and located so that chains will hold each counter section in a closed position.



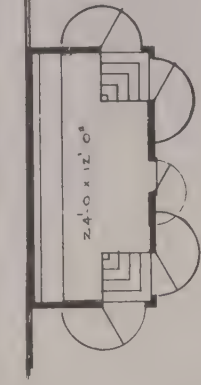
1



3



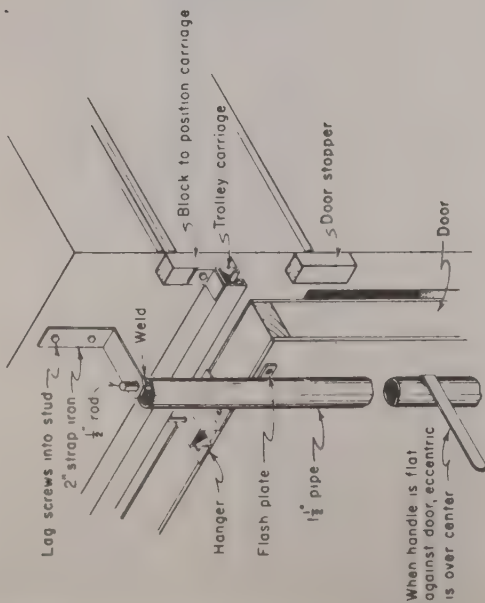
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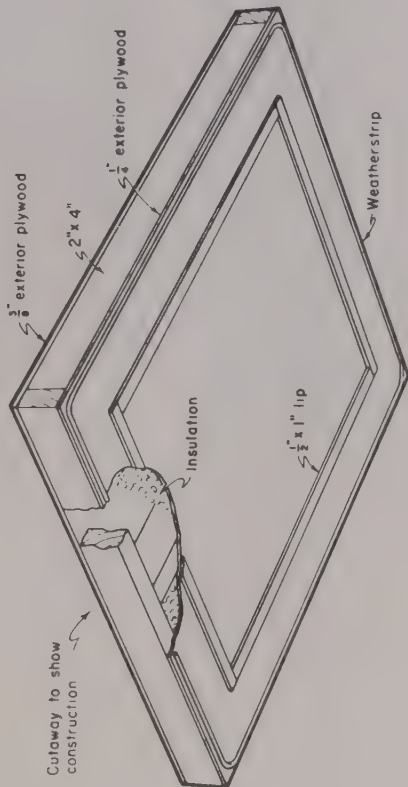
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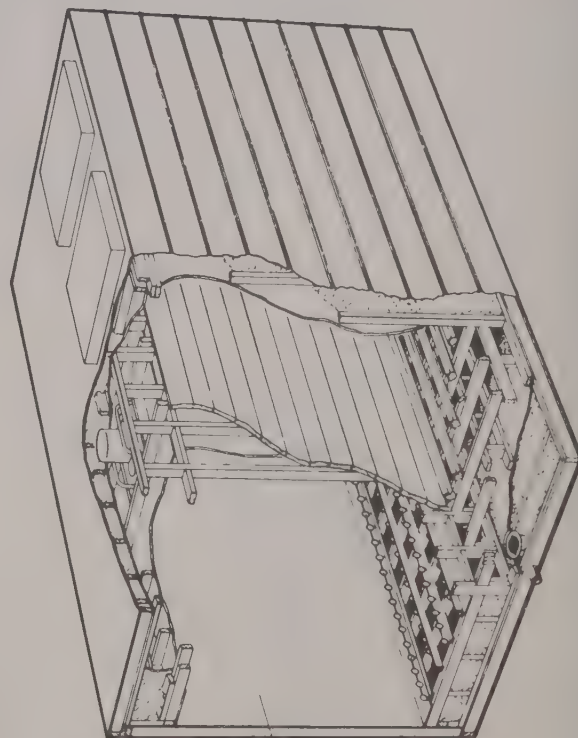
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS FEDERAL BUREAU OF EXTENSION UNIVERSITY OF CALIFORNIA, STANFORD UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING			
SUGGESTED LAYOUTS FOR ROADSIDE STANDS			
N. J.	'33	EX.	9190
SHEET 1 OF 1			



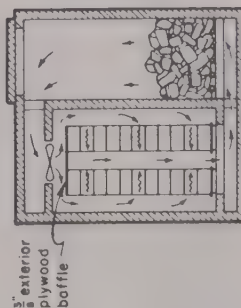
ECCENTRIC DOOR JAM DETAIL



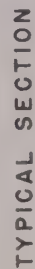
HATCH COVER DETAIL
DOOR CONSTRUCTION IS SIMILAR



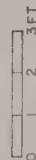
**CUTAWAY
PERSPECTIVE**



**SECTION
AIR FLOW DIAGRAM**



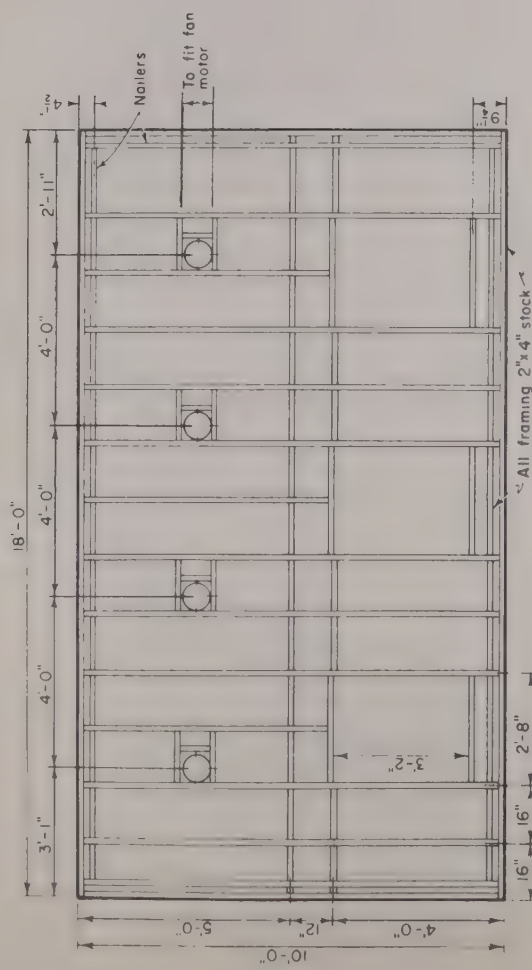
NOTE -
FOUR FANS, WITH A TOTAL
CAPACITY OF 6500 cfm
AT 3/4" STATIC PRESSURE
ARE REQUIRED



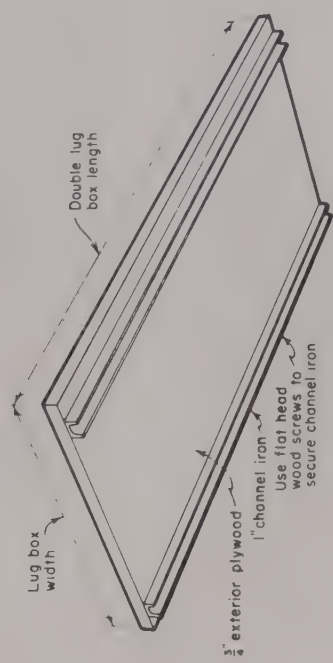
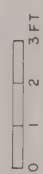
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

FORCED AIR
FRUIT COOLER

CAL.	'58	EX. 5860	SHEET 2 OF 3
------	-----	----------	--------------

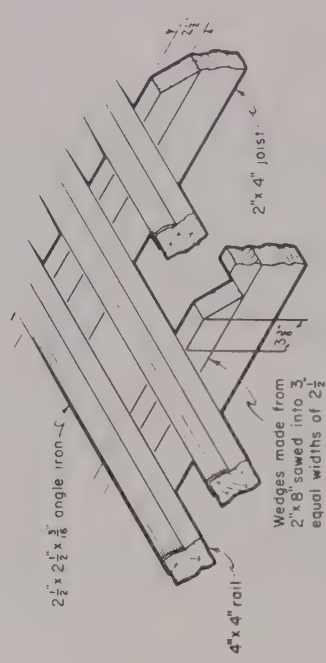


ROOF FRAMING

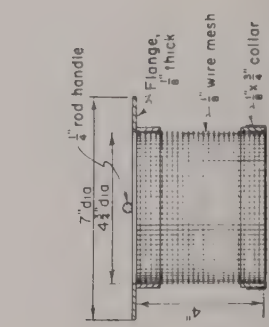


FRUIT CAR DETAIL

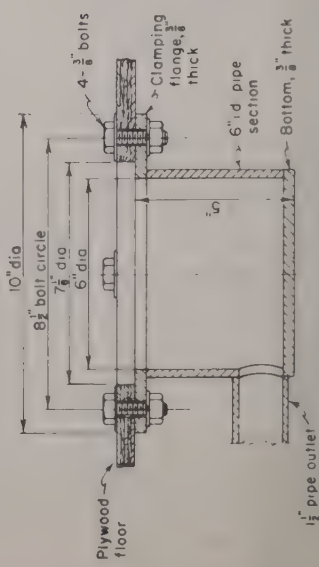
Six required



ICE RACK DETAIL

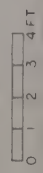


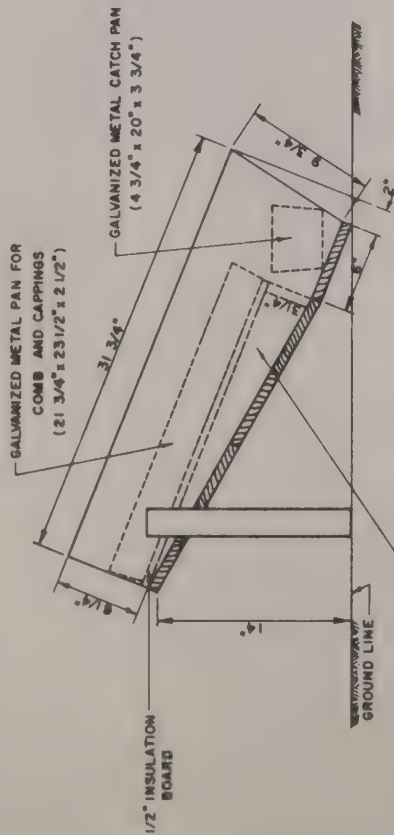
SCREEN CUP



HOUSING

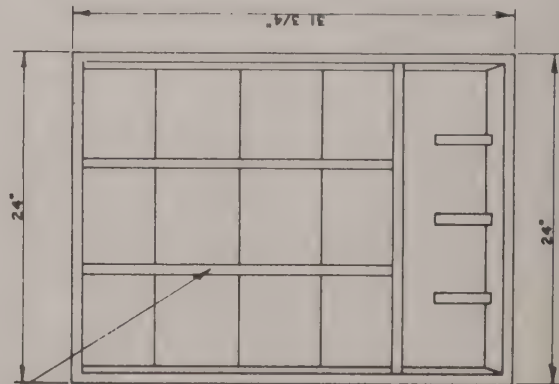
DRAIN DETAIL



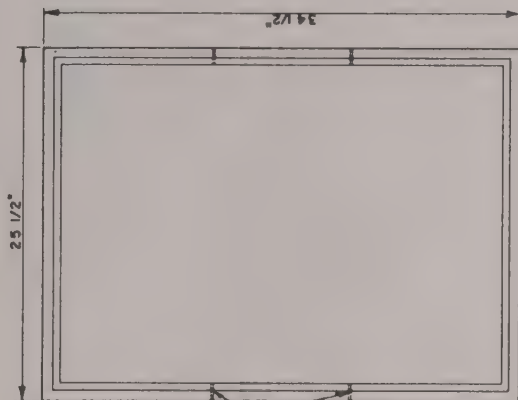


SIDE VIEW

3/4" SUPPORT STRIPS



TOP VIEW



TOP VIEW OF LID

1/4" VENTILATION HOLES BETWEEN GLASS

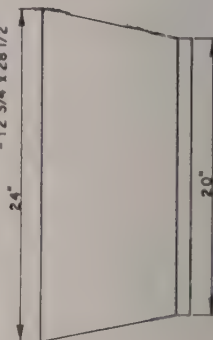
GENERAL NOTES:

1. PAINT INSIDE WHITE.
2. PAINT OUTSIDE BLACK.
3. SEAL ALL CRACKS.
4. PLACE IN PROTECTED LOCATION ON SOUTH SIDE OF A BUILDING.
5. REMOVE WAX AND HONEY WHEN MOST COMBS ARE MELTED TO AVOID BURNING THE HONEY.

BILL OF MATERIALS:

1. LID & SIDES - 1" x 10" x 12" BOARD
2. T & G FLOORING - 6 1/2 BD. FT. x 6"
3. WOOD STRIPS FOR LID - 1/2" x 2" x 36 LIN. FT.
4. WOOD STRIPS FOR LEGS - 2" x 2" x 36 LIN. FT.
5. 2 PIECES DOUBLE STRENGTH GLASS 32" x 24"
6. 1/2" INSULATION BOARD 21 1/8" x 22" x 2 1/2"
7. 24" GAUGE GALVANIZED STEEL - 25 3/4" x 26 1/2" - 12 3/4" x 26 1/2"
- 8.

9. 2, 3, OR 4 MESH HARDWARE CLOTH 26 1/2" x 27"
10. 3 DOZ. 11/2 OR 2" NO. 8 SCREWS
11. SMALL CAN BLACK PAINT
12. SMALL CAN WHITE
13. SMALL CAN OF PUTTY
14. SMALL BOX OF THIN NAILS - FOR 1 1/4"
15. CARPET TACKS - 1 BOX



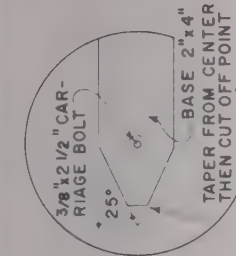
END VIEW

WASHINGTON STATE UNIVERSITY
Cooperative Extension Service

SOLAR BEESWAX EXTRACTOR
(Adapted from plans by Penn
State University)

No. 433

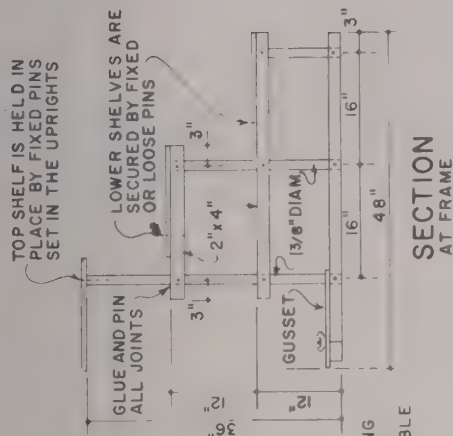
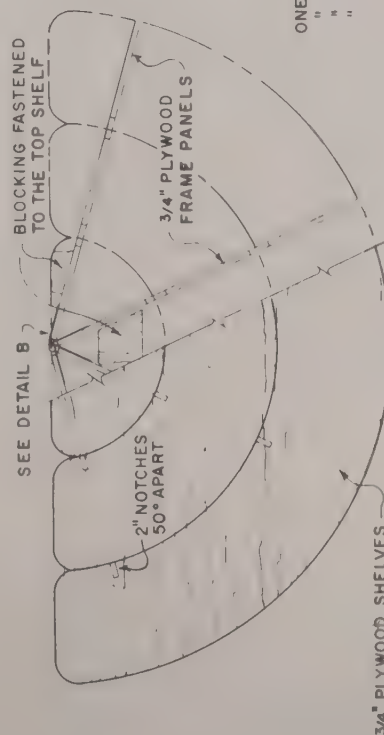
April, 1966



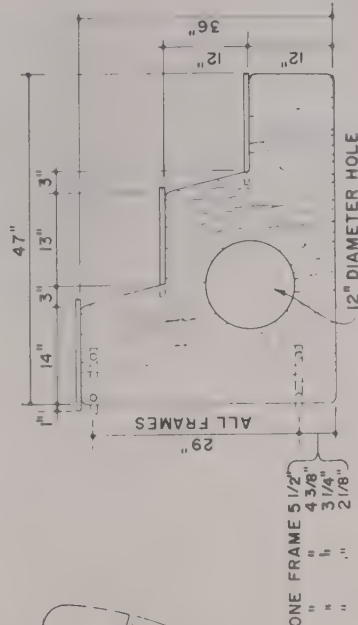
DETAIL A

ITEM	SIZE	NO.
PLYWOOD	1/2"x4'0"x8'-0"	ONE
WOOD	2"x4'x4'-0"	FOUR
"	2"x4'x5'-0"	FOUR
"	1"x8'x8'-0"	ONE
"	3/8"0x6'-0"	FOUR

(FASTENINGS NOT INCLUDED)

SECTION
AT FRAME

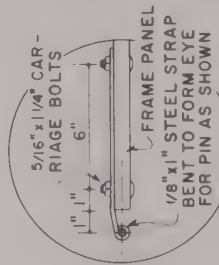
TOP VIEW
SHELVES CUT AWAY



SECTION AT FRAME PANEL

ITEM	SIZE	NO.
PLYW'D	3/4" x 4'-0" x 8'-0"	TWO
	<i>OR</i>	
PLYW'D	3/4" x 4'-0" x 8'-0"	ONE
"	1/2" x 4'-0" x 8'-0"	ONE
WOOD	1" x 8" x 10'-0"	ONE
FASTENINGS (NOT INCLUDED)		

DETAIL B



MATERIALS

The image shows the front cover of a report. At the top, the text 'COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS' is printed in a sans-serif font. Below this, the title 'TWO DISPLAY STANDS FOR PRODUCE' is prominently displayed in a large, bold, sans-serif font. Underneath the title, the author 'UNITED STATES DEPARTMENT OF AGRICULTURE' is printed in a smaller font. At the bottom of the cover, there is a table with two rows. The first row contains 'USDA' and '64'. The second row contains 'EX' and '5982'. To the right of this table, the text 'SHEET 1 OF 1' is printed vertically.

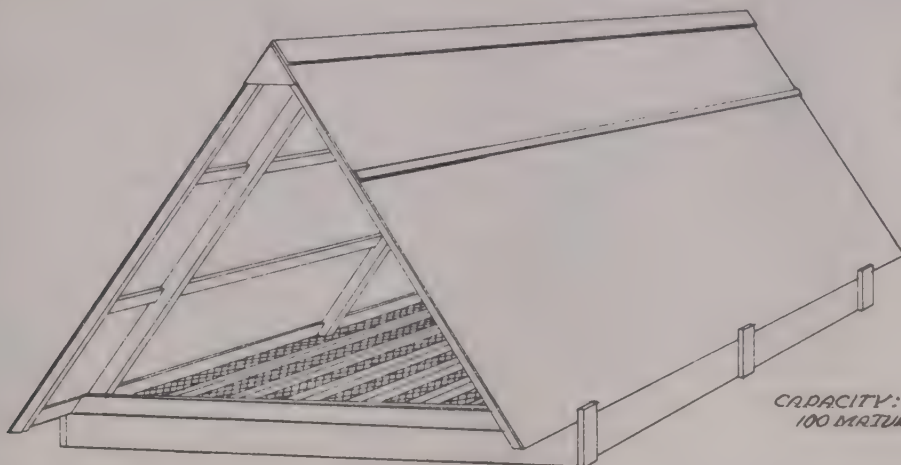
SHELVES FOR TYPE II MAY BE OF 1/2" PLYWOOD IF 1"x8" STIFFENERS ARE FASTENED UNDER THE BOTTOM SHELF, AS SHOWN FOR TYPE I

HEIGHT OF TYPE I MAY BE AS DESIRED, BUT HEIGHT OF TYPE II IS PLANNED TO PERMIT CUTTING THE FOUR FRAME PANELS FROM ONE SHEET OF PLYWOOD

USE EXTERIOR GRADE PLYWOOD
SAND ALL EDGES AND SEAL WITH A
WATERPROOF PENETRATING SEALER
WATERPROOF GLUE IS REQUIRED

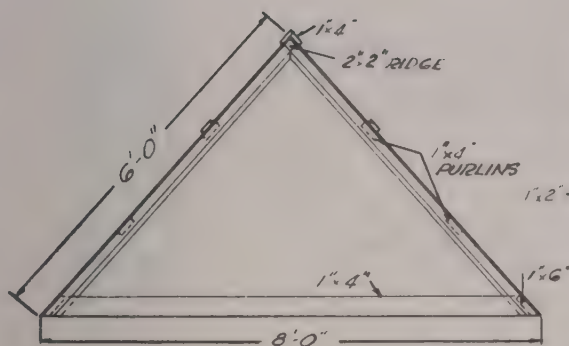
POULTRY HOUSES



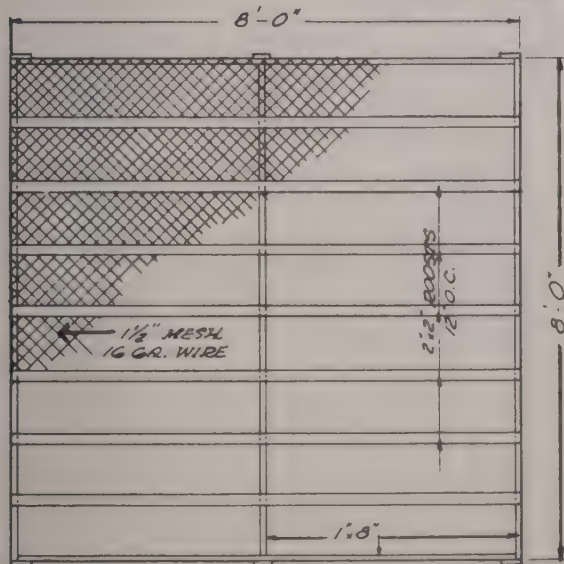
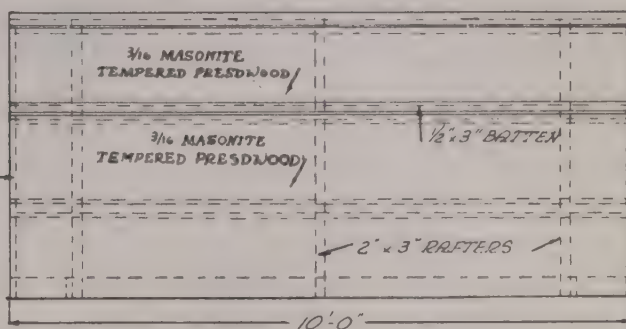


CAPACITY:-
100 MATURE PULLETS

PERSPECTIVE



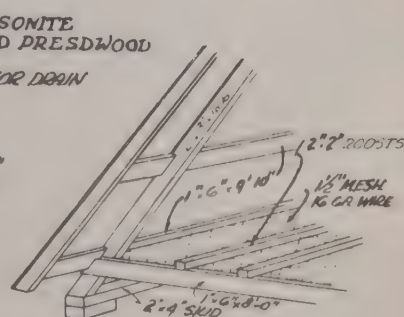
SHELTER DETAIL



TOP VIEW

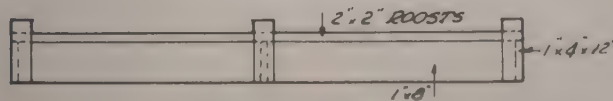


F.S. JOINT
DETAIL



ALTERNATE
CONSTRUCTION

THIS TYPE MAY BE BUILT
WHERE A SINGLE UNIT IS
DESIRED. THE OTHER TYPE
SHOWN HAS A REMOVABLE BASE.



SIDE VIEW

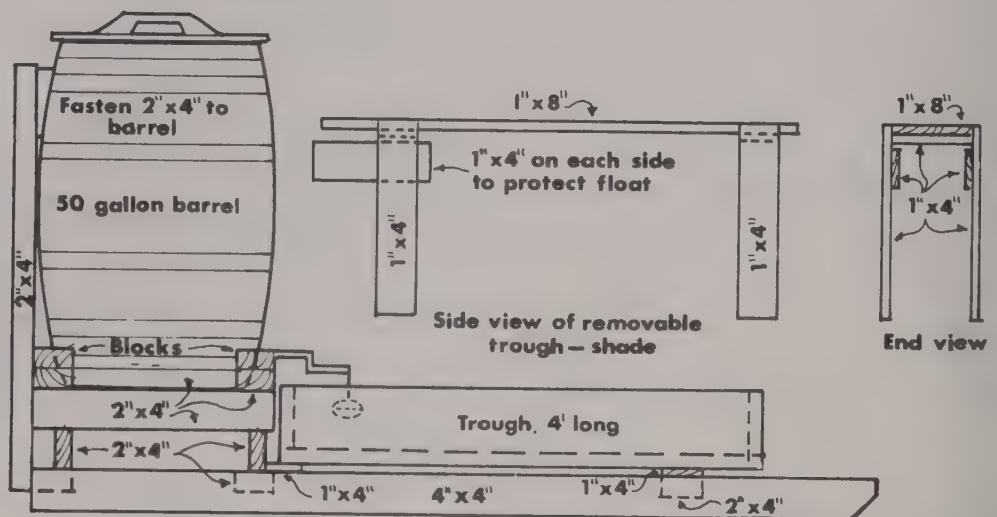
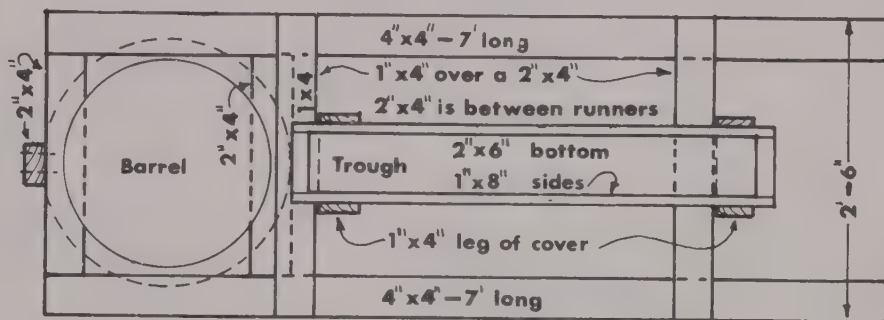
BASE DETAIL

ECONOMY RANGE SHELTER

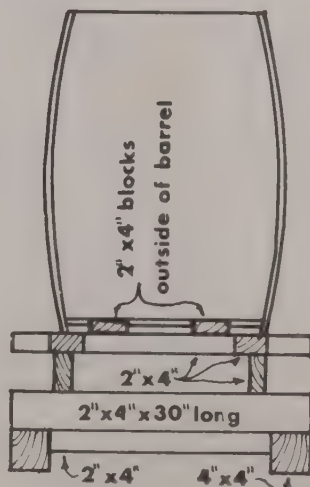
OF MASONITE TEMPERED PRESWOOD

MASONITE CORPORATION
111 W. WASHINGTON ST., CHICAGO, ILLINOIS
ENG. DEPT. AFB-158

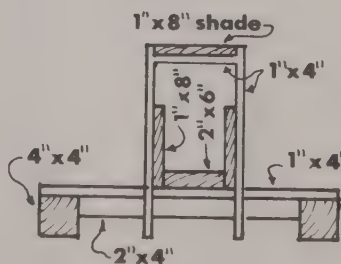
Plan View of Sled, Barrel and Trough



Side view



Section at barrel

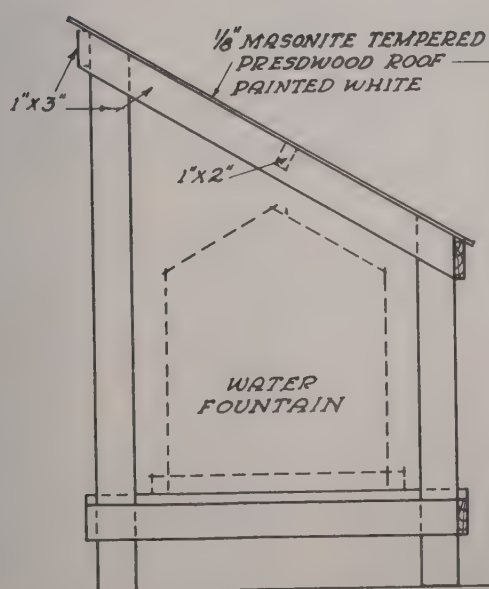
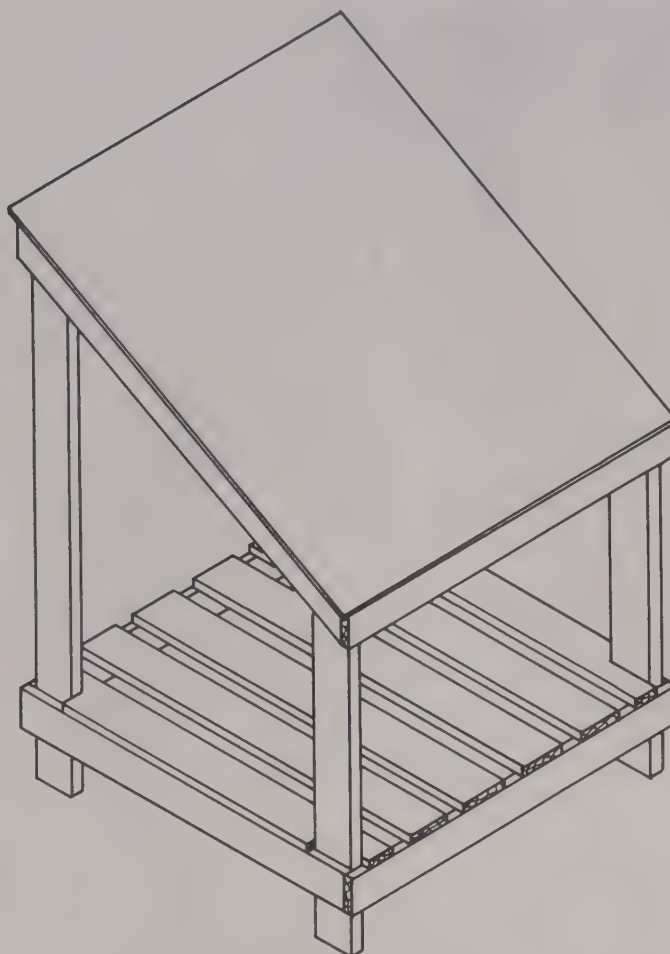


Section at trough

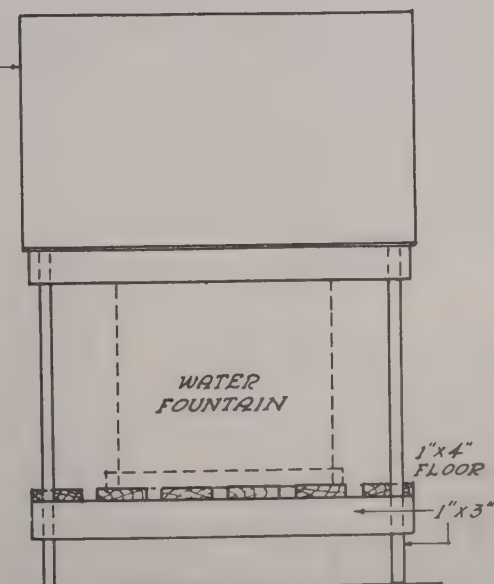
Poultry Waterer

Adapted from Texas A & M College Plan, Serial No. 327.

WATER FOUNTAINS SHOULD BE KEPT OUT OF SUNLIGHT AS MUCH AS POSSIBLE IN ORDER THAT THE PULLETS WILL HAVE COOL FRESH WATER BEFORE THEM THROUGH-OUT THE DAY.

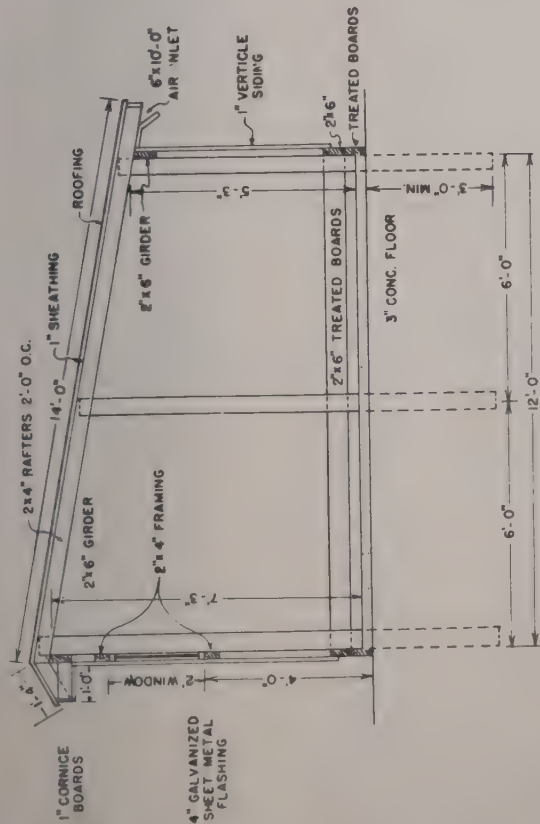


END VIEW

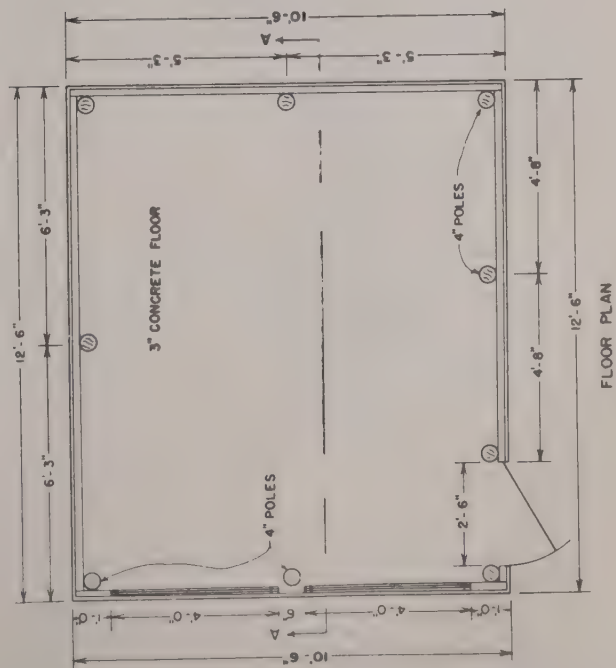


SOUTH ELEVATION

WATER FOUNTAIN STAND 1/8" MASONITE TEMPERED PRESWOOD ROOF



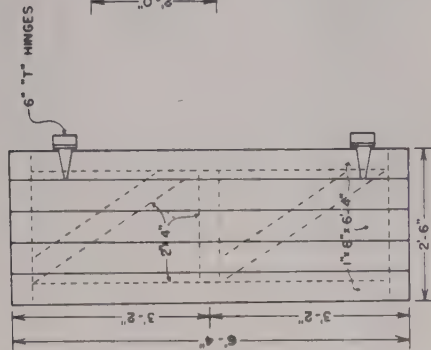
SECTION A-A



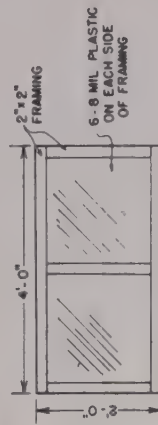
FLOOR PLAN

BILL OF MATERIALS

3 PCS 1" POLES, 4" TOP DIAMETER, TREATED
 6 PCS 1" POLES, 4" TOP DIAMETER, TREATED
 3 PCS 2" x 6" x 12' TREATED BOARDS
 6 PCS 2" x 4" x 14' RAFTERS
 6 PCS 2" x 4" x 10' DOOR FRAMING & BRACES, WINDOWS, & FRONT OVERHANG
 4 PCS 2" x 4" x 12' DOOR FRAMING & WINDOW FRAMING
 24 PCS 1" x 6" x 12' T & G SIDING
 14 PCS 1" x 6" x 12' T & G SIDING
 12 PCS 1" x 6" x 10' T & G SIDING
 6 PCS 1" x 6" x 12' CORNICE
 2 PCS 1" x 6" x 14' CORNICE
 35 PCS 1" x 6" x 12' SHEATHING
 6 EACH 6" x 6" x 6" HINGES
 6 EACH GREEN DOOR HOOK AND EYE
 9 FEET 4" WIDE, 6-8 MIL PLASTIC
 1 1/6 CU YDS. CONCRETE 6 BAG MIX
 12 LBS. 80D NAILS
 12 LBS. 60D NAILS
 1 LB. FLAT HEAD NAILS FOR PLASTIC
 3 SHEETS 16" x 64" METAL ROOFING
 1 RIDGE CAP
 350-400 ROOFING NAILS - BUY NAIL FROM SAME DEALER AS ROOFING

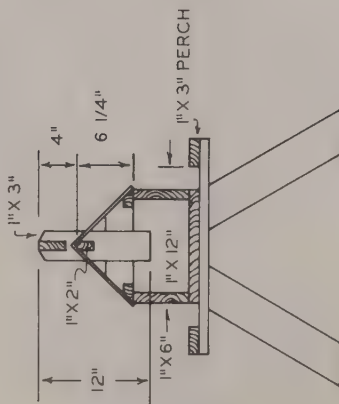


DOOR DETAIL

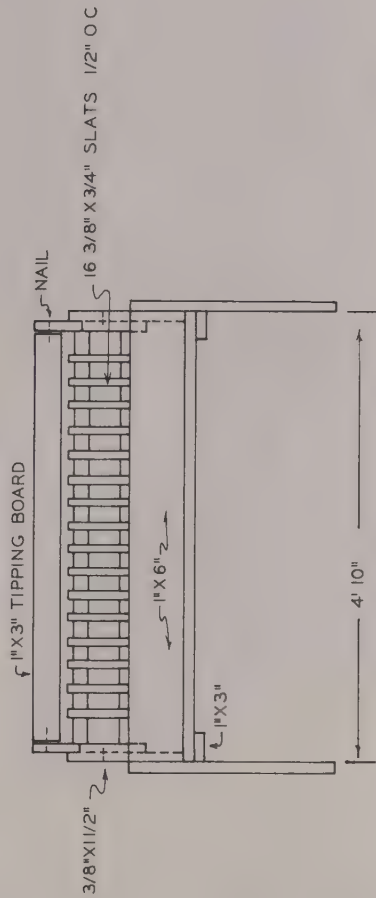


WINDOW DETAIL

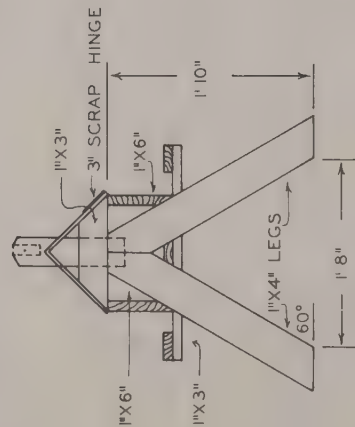
COOPERATIVE EXTENSION SERVICE	
AGRICULTURAL ENGINEERING DEPARTMENT	
VIRGINIA POLYTECHNIC INSTITUTE AND	
STATE UNIVERSITY, BLACKSBURG, VIRGINIA	
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING	
AND	
BROODER & GROWING HOUSE FOR	
4-H POULTRY PROJECT	
MAR 1966	F-2.16
REV. 67	REV. 67 BHB
COP. 67	



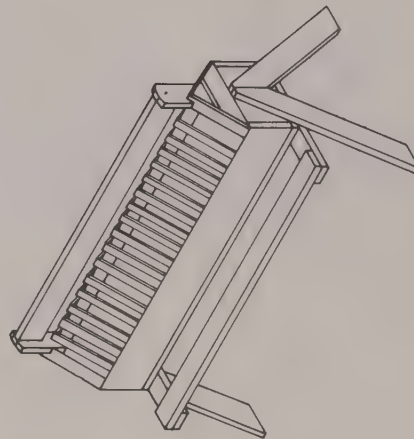
CROSS SECTION



SIDE ELEVATION



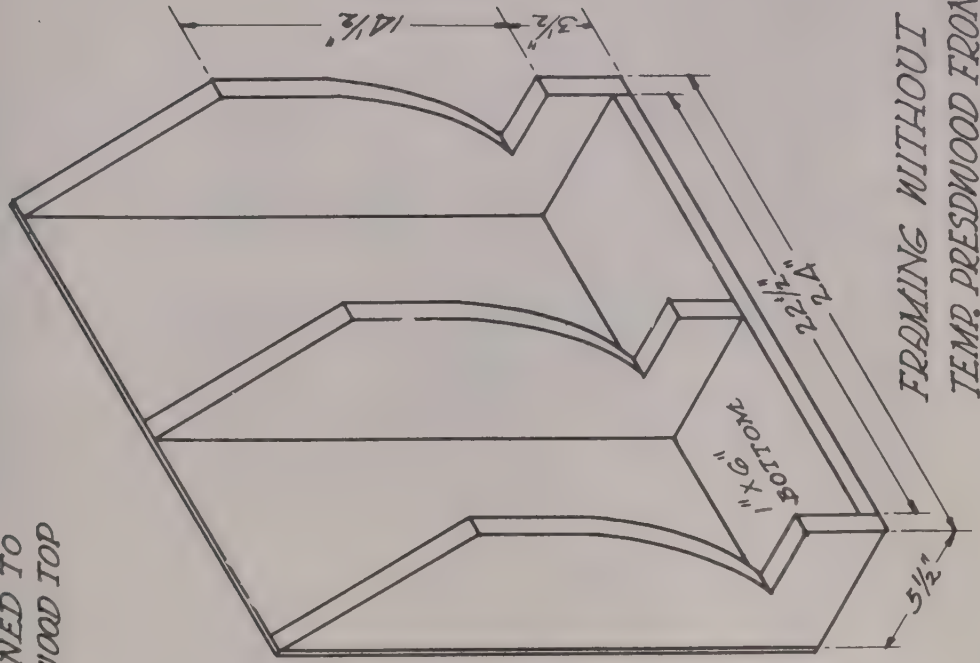
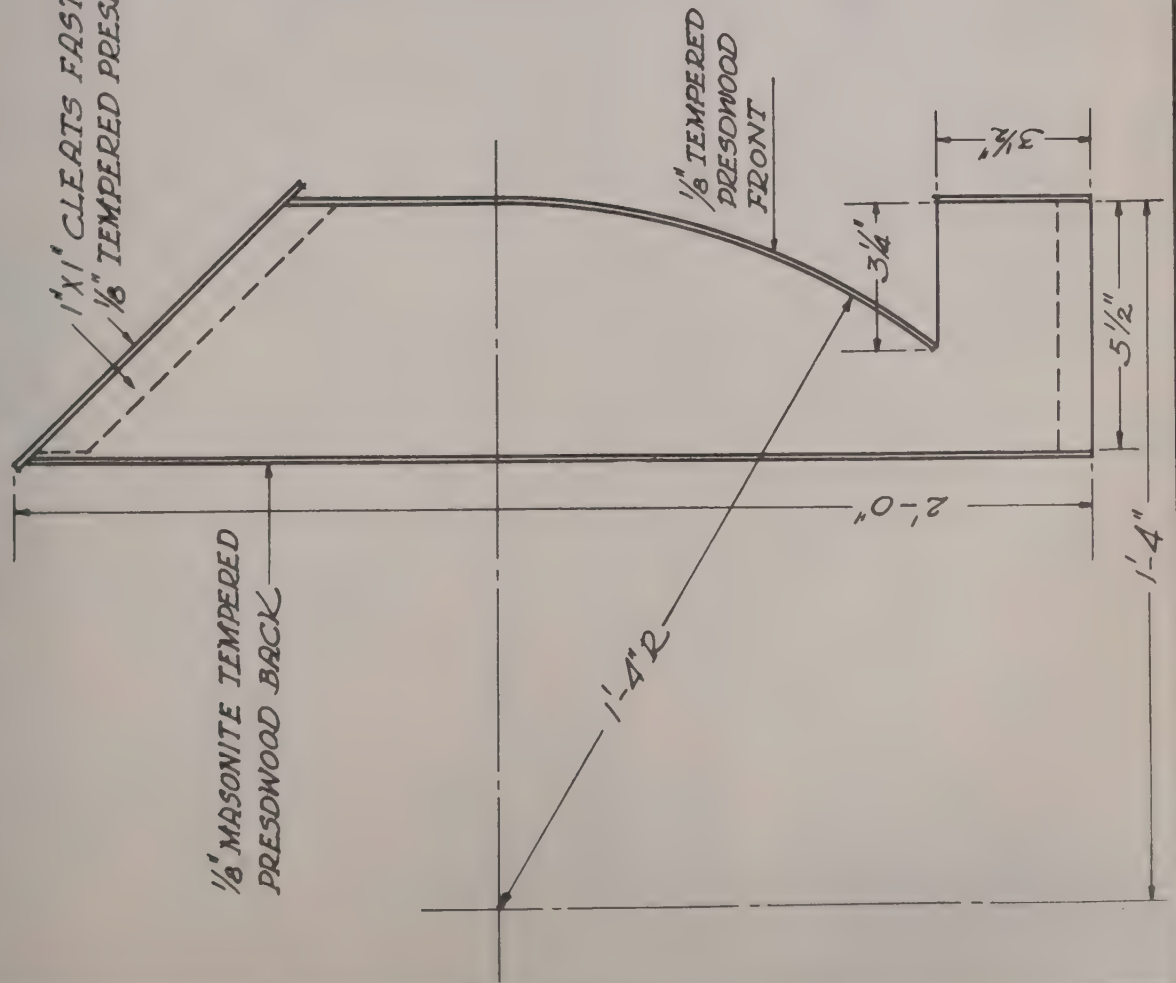
END ELEVATION



ISOMETRIC

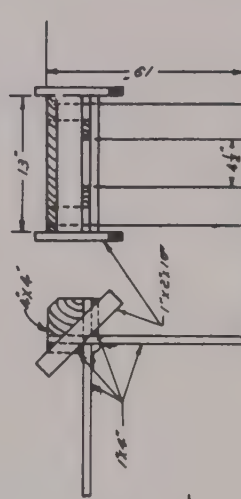
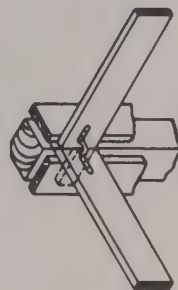
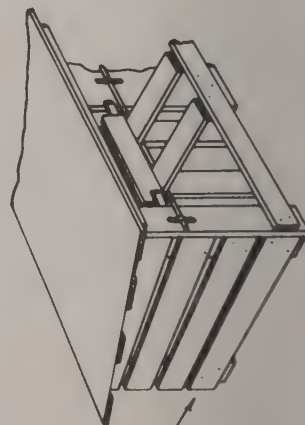
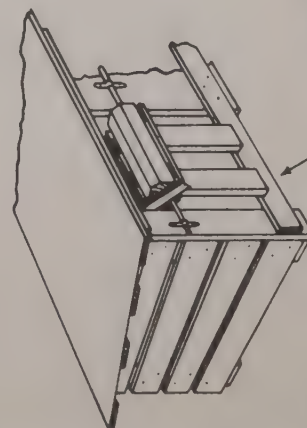
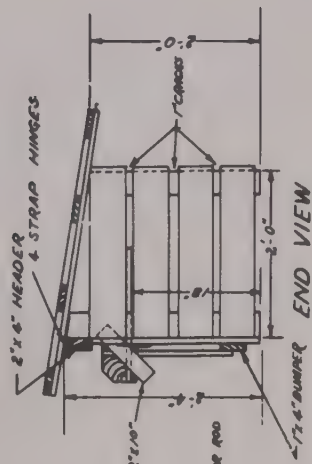
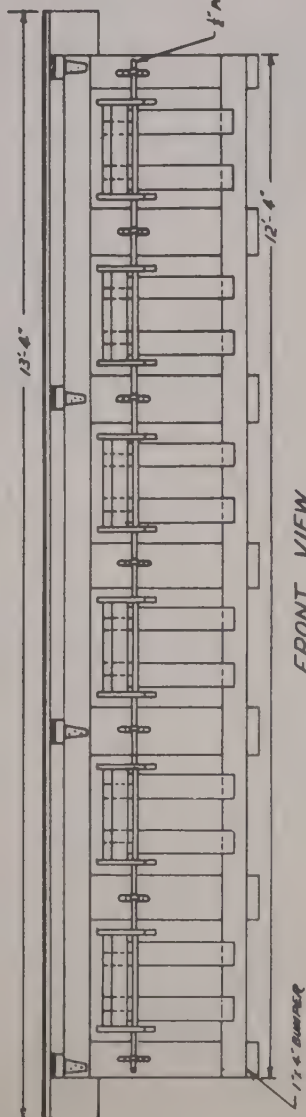
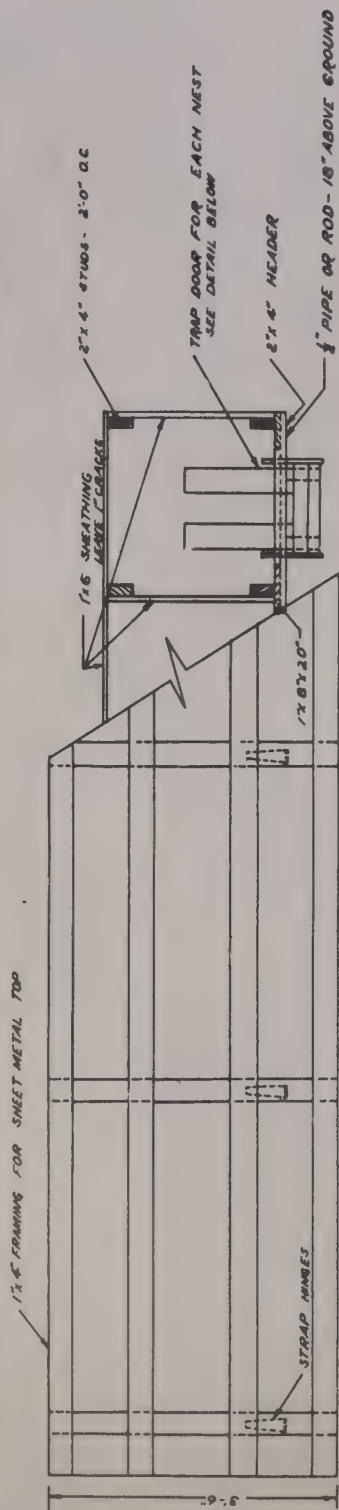
Cooperative Extension Work in Agriculture & Home Economics The Ohio State University The Ohio State University J. F. Hutchison, Director, College Station, Ohio		APPROVED BY	DATE	9/58
DRAWN BY		REVIEWED BY	SLG.	VTB.
MASH FEEDER		DRAWING NUMBER		
		453		

DETAIL OF GRIT AND OYSTER SHELL FEEDER.



FRAMING WITHOUT
TEMP. PRESWOOD FRONT.

MASONITE CORPORATION
ENGINEERING DEPARTMENT
111 N. WASHINGTON ST. CHICAGO, ILLINOIS
2FB-144



BILL OF MATERIAL

6 1/2"	LINEAR FT.	4" x 4"
44	"	2" x 4"
14	"	1" x 8"
108	"	1" x 6"
130	"	1" x 4"
12	"	1/2" Pipe or rod
18	1/2" Apo Straps	
10	4 Straps Nings	
Nails, etc.		
Roof Area = 47 1/2 sq ft		

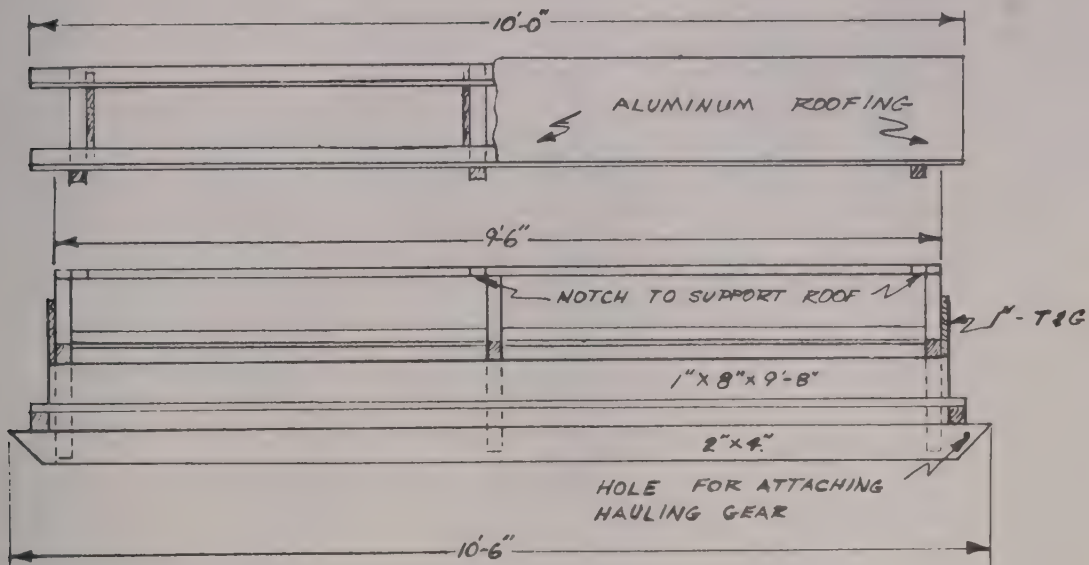
Wells, etc.

Roof Area = 47½ sq ft

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF NORTH CAROLINA
NORTH CAROLINA STATE COLLEGE
AND
U. S. DEPT. OF AGRICULTURE COOPERATING
EXT. AGR. ENGINEER - RALEIGH, N. C.

TURKEY NEST

N.C.	Nº 2033	SHEET 1 OF 1
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FRONT VIEW

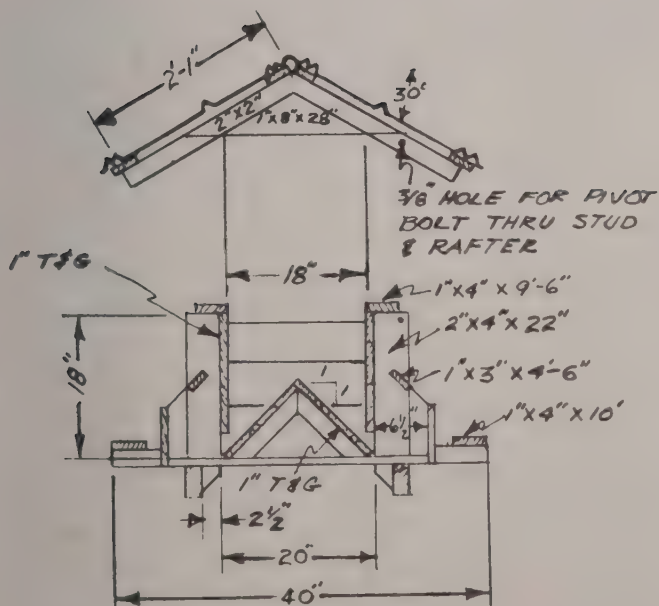
BILL OF MATERIALS

LUMBER :

3 PCS	2" X 4" X 12'
3 PCS	2" X 2" X 12'
8 PCS	1" X 4" X 10'
2 PCS	1" X 3" X 10'
3 PCS	1" X 8" X 10'
100 BD FT. 1" T&G	

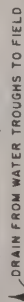
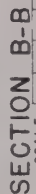
ROOFING :

2 PCS. 26" X 10' ALUMINUM



CROSS SECTION

COOPERATIVE EXTENSION WORK IN
AGRICULTURE & HOME ECONOMICS
STATE OF NORTH CAROLINA
NORTH CAROLINA STATE COLLEGE
AND
U.S. DEPT. OF AGRICULTURE COOPERATING
EXT. AGR. ENGINEER - RALEIGH, N.C.
TURKEY RANGE SELF FEEDER.

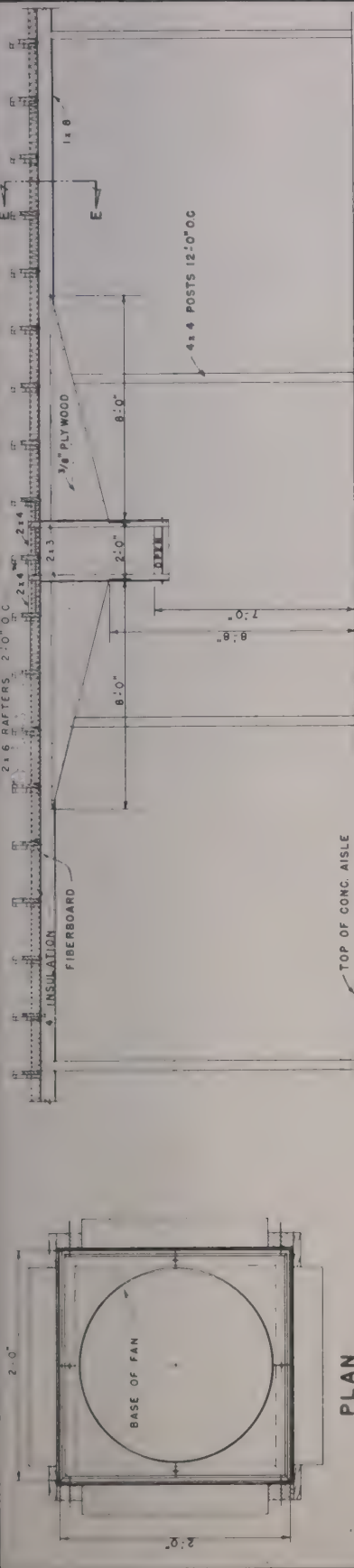
[illegible]

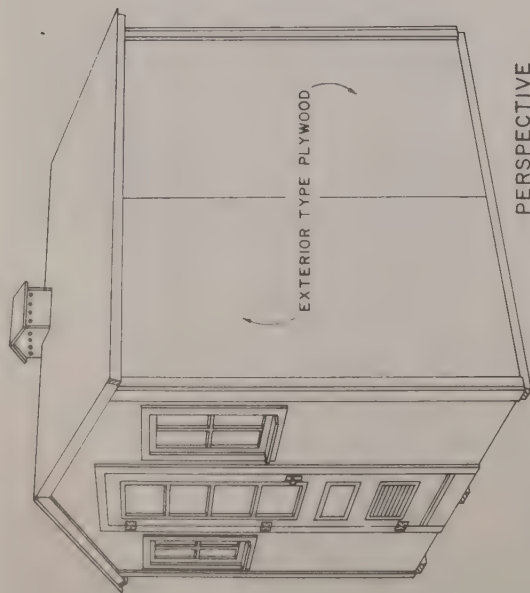
PERSPECTIVE

EQUIP WITH AN ADEQUATE LIGHTNING PROTECTION SYSTEM WHERE NEEDED.

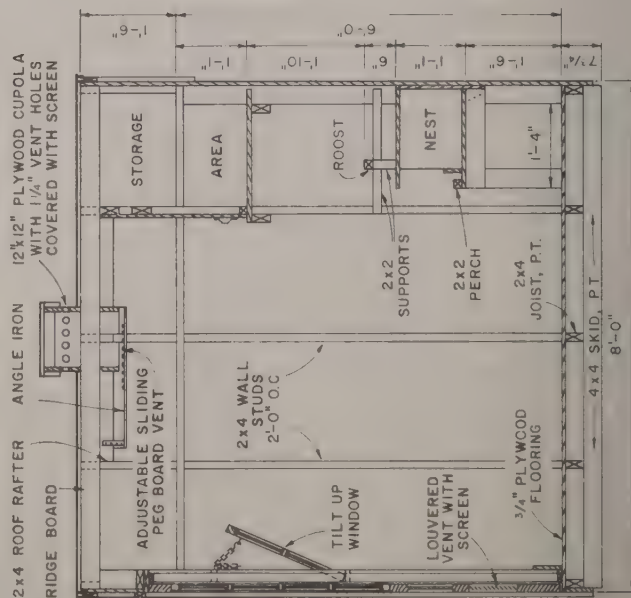
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

COLONY CAGE HOUSE
STRETCHED WIRE, BLOCK CONSTRUCTION
USDA '62 EX 5936 SHEET 1 OF 2



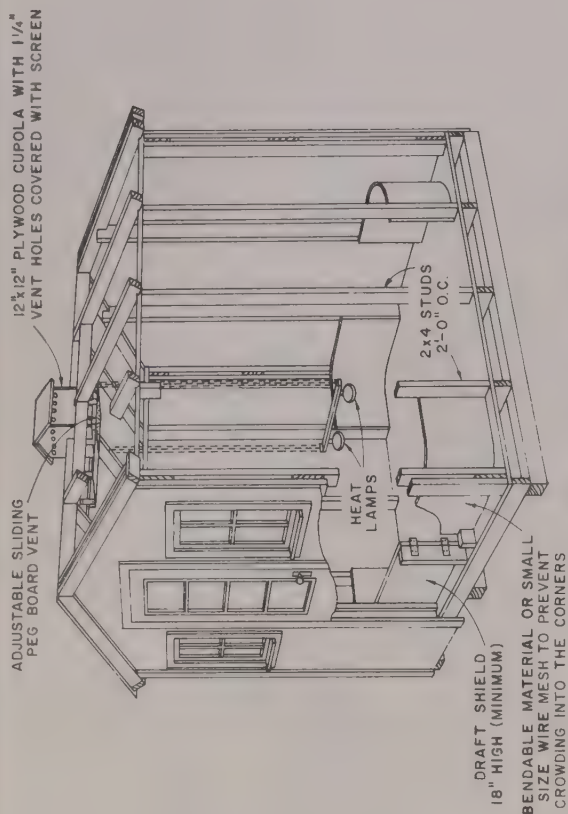


PERSPECTIVE
BROODER HOUSE
LAYING HOUSE
CHICKEN HOUSE-BANTAMS
PIGEON HOUSE

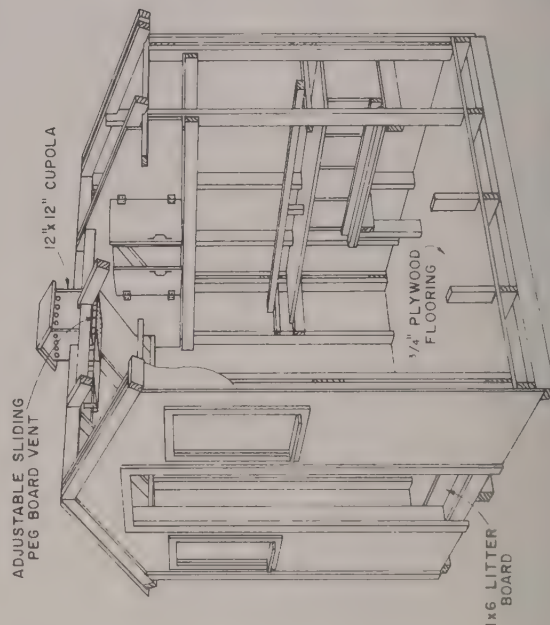


SECTION
LAYING HOUSE

NOTE:
P.T.=PRESSURE TREATED



CUTAWAY VIEW
OF 8x8' BROODER HOUSE



CUTAWAY VIEW
OF 8x8' LAYING HOUSE

NOTE
CAPACITY 15-20 HENS
4-NESTS
ROOST & STORAGE AREAS.

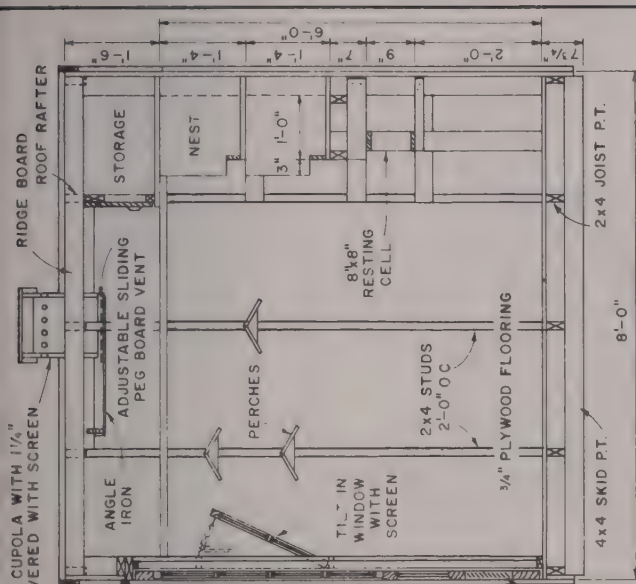
NOTE:
BASED ON: UNIV. OF WISCONSIN
PLANS NO. WP 5702, 5703, 5704
AND 5705.
CONSULT LOCAL HEALTH AND
BUILDING CODE AUTHORITIES
BEFORE STARTING CONSTRUCTION.

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

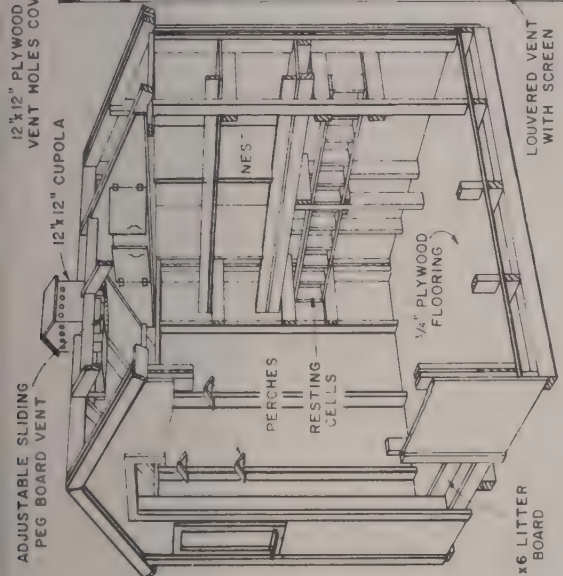
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

POULTRY & PIGEON HOUSES
BROODERS-LAYERS-BANTAMS

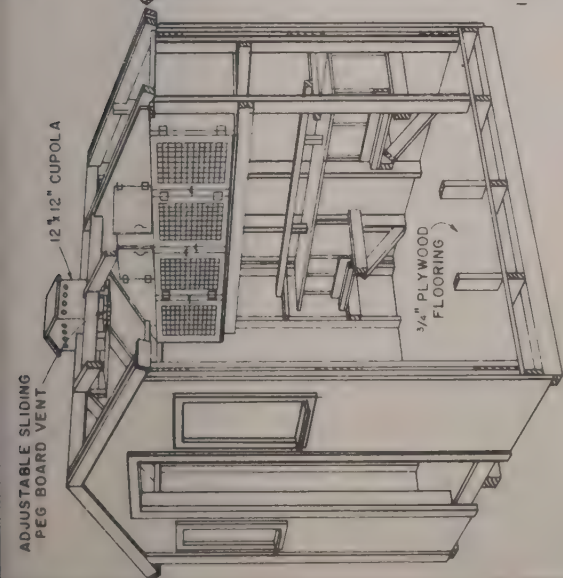
WISC 75 6232 SHEET OF 2



PERSPECTIVE
OF CHICKEN HOUSE - BANTAMS

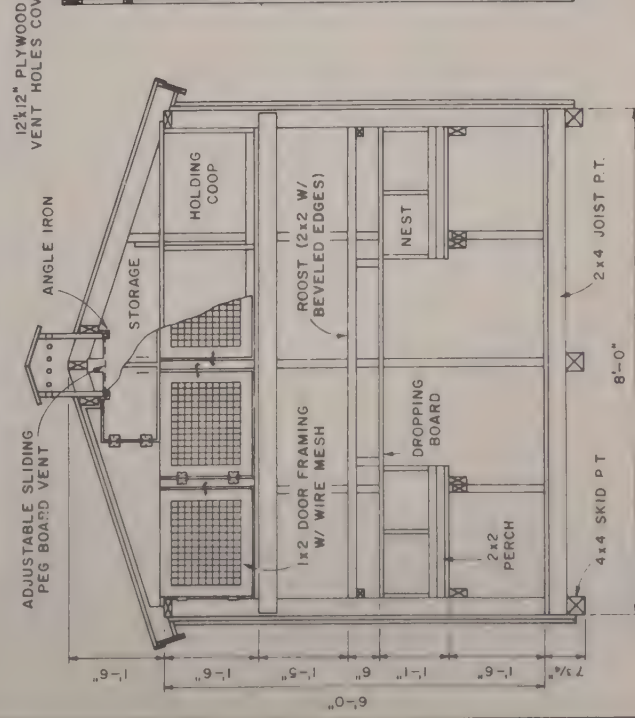
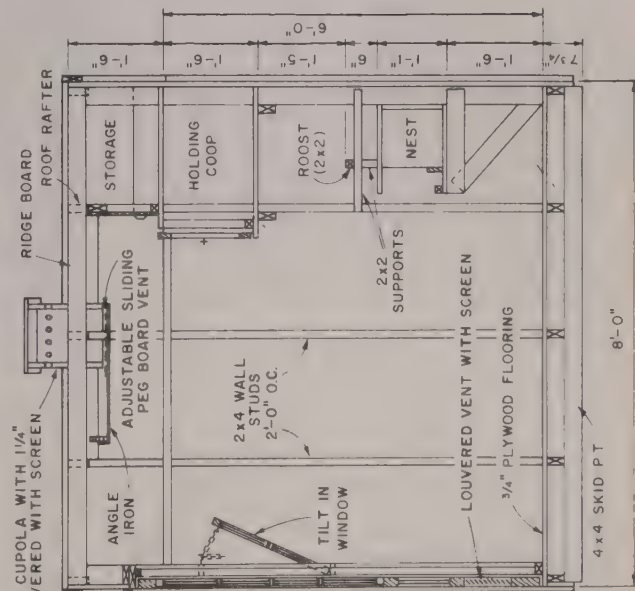


PERSPECTIVE
OF CHICKEN HOUSE - BANTAMS



PERSPECTIVE
OF CHICKEN HOUSE - BANTAMS

SECTION
OF PIGEON HOUSE



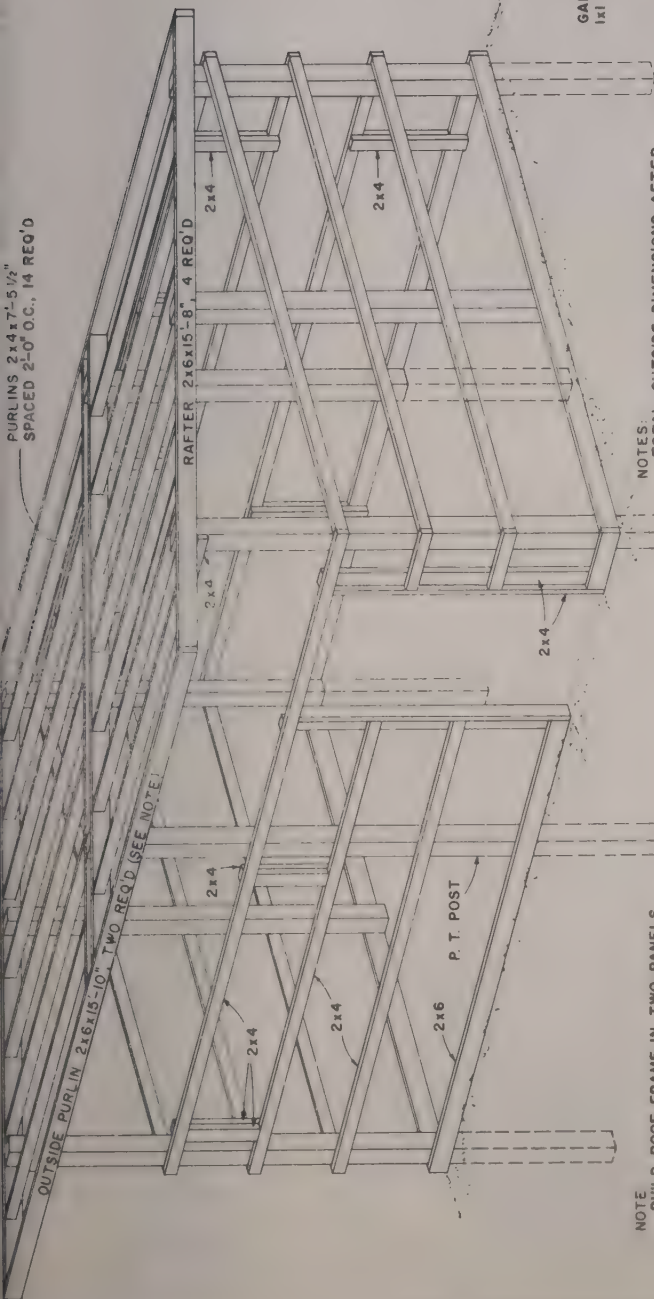
SECTIONS
OF CHICKEN HOUSE - BANTAMS

NOTE:
P.T. = PRESSURE TREATED



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS	
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING AND	
POULTRY & PIGEON HOUSES BROODERS-LAYERS-BANTAMS	
WISC '75	6232
SHEET 2 OF 2	

150

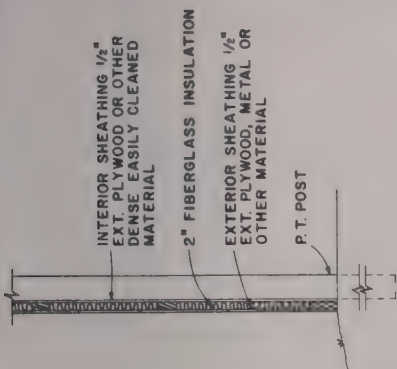


NOTE
BUILD ROOF FRAME IN TWO PANELS
NAIL EACH PANEL TO PRESSURE
TREATED (P.T.) POSTS, THEN ATTACH
THE TWO OUTSIDE PURLINS.

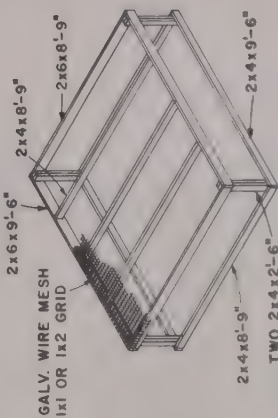
FRAME PICTORIAL

NOTES:
TOTAL OUTSIDE DIMENSIONS AFTER
CONSTRUCTION APPROXIMATELY 12'x16'.
FLOOR MAY BE DIRT OR CONCRETE.
CONSULT LOCAL HEALTH AND BUILDING
CODE AUTHORITIES BEFORE STARTING
CONSTRUCTION.

TYPICAL WALL SECTION

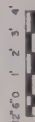


12" 9" 6" 3" 0"



NOTE:
ENCLOSE BOTH ENDS AND ONE SIDE WITH
1/2" EXT. PLYWOOD. OPEN SIDE TO FACE
OUTSIDE CLEAN-OUT DOOR. MUST BE
BUILT INSIDE OF HOUSE.

ROOST & FEED PLATFORM DETAILS



BASED ON: W. VA. UNIV.
PLAN NO. PO 146

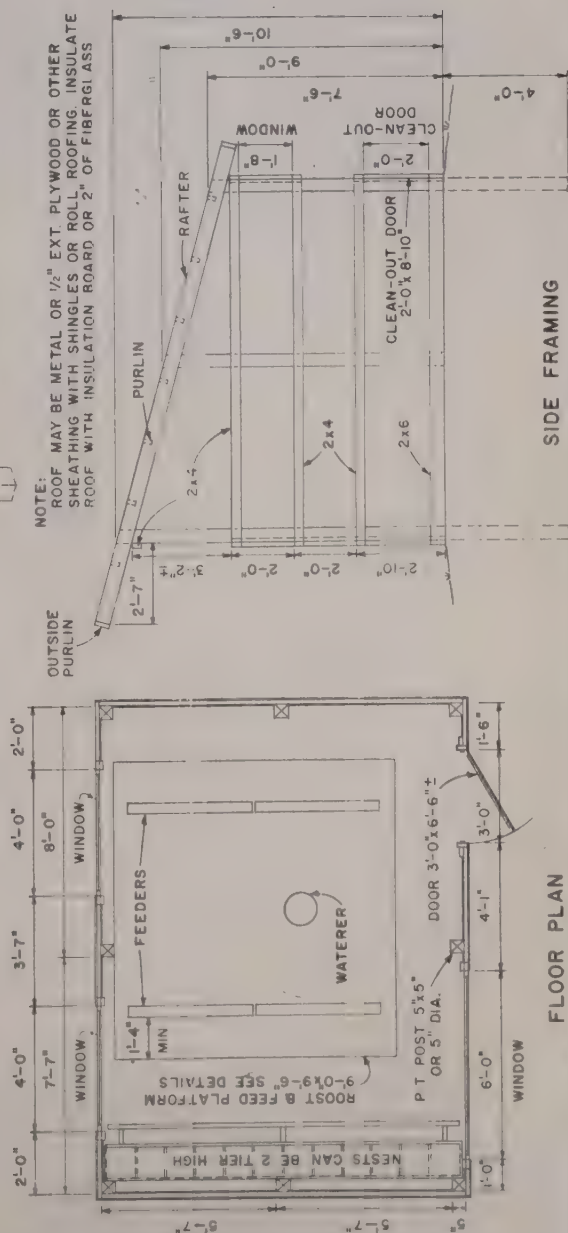
OTHERWISE NOTED
12" 6" 0' 1' 2' 3'

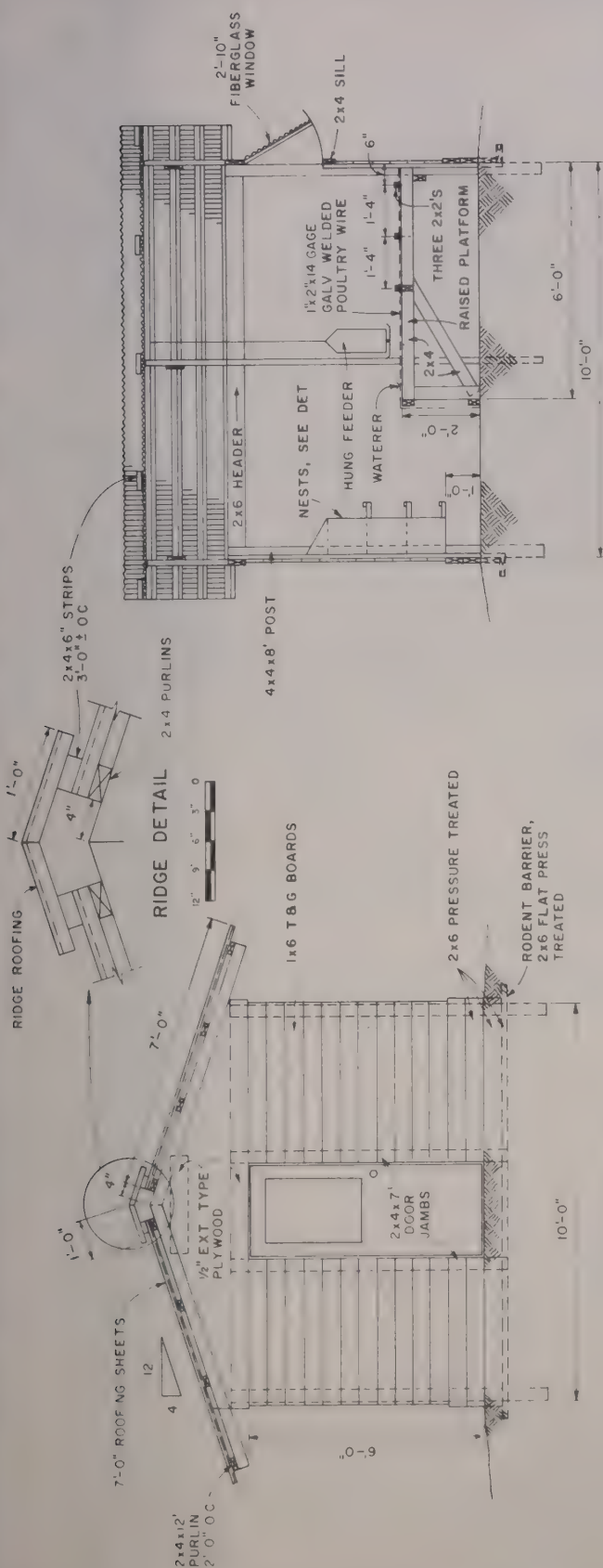
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING
AND

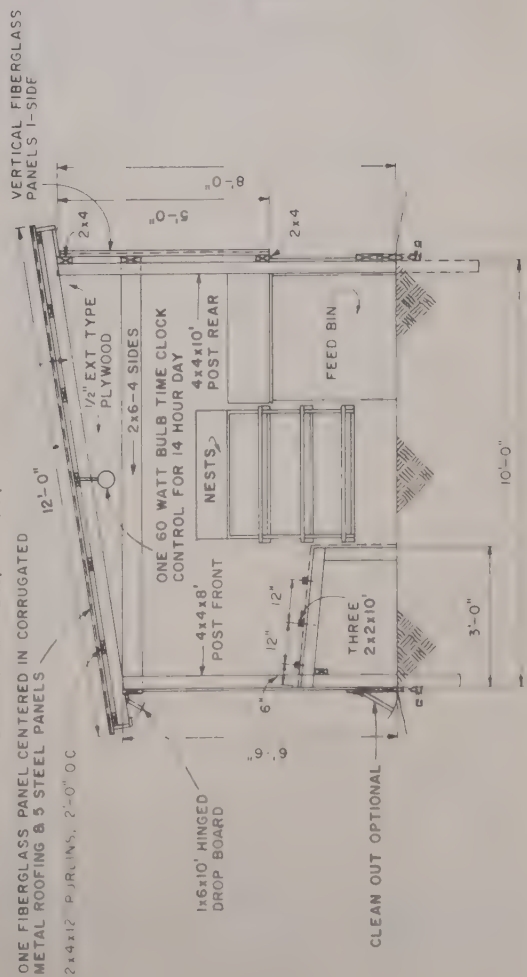
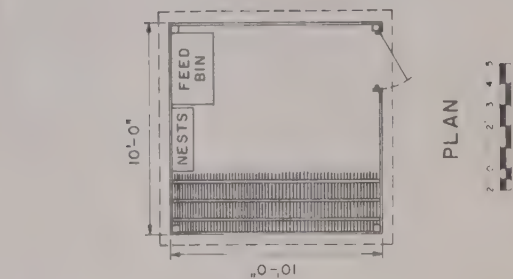
POULTRY HOUSE
50 TO 80 LAYERS

W VA	'74	6188	SHEET 1 OF 1
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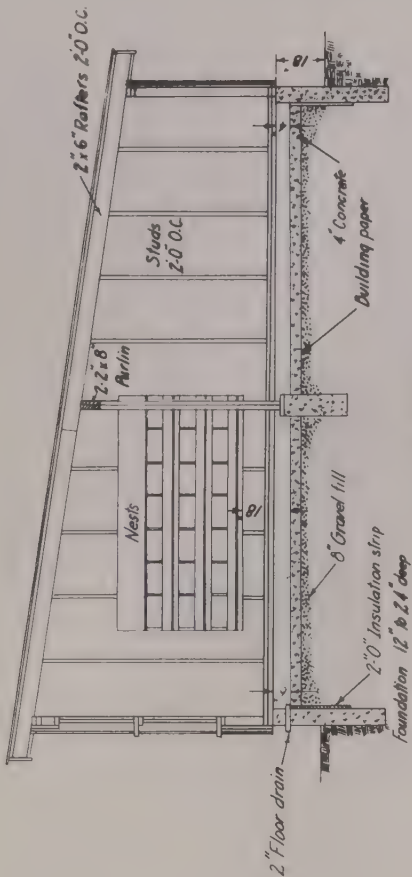


CROSS SECTION

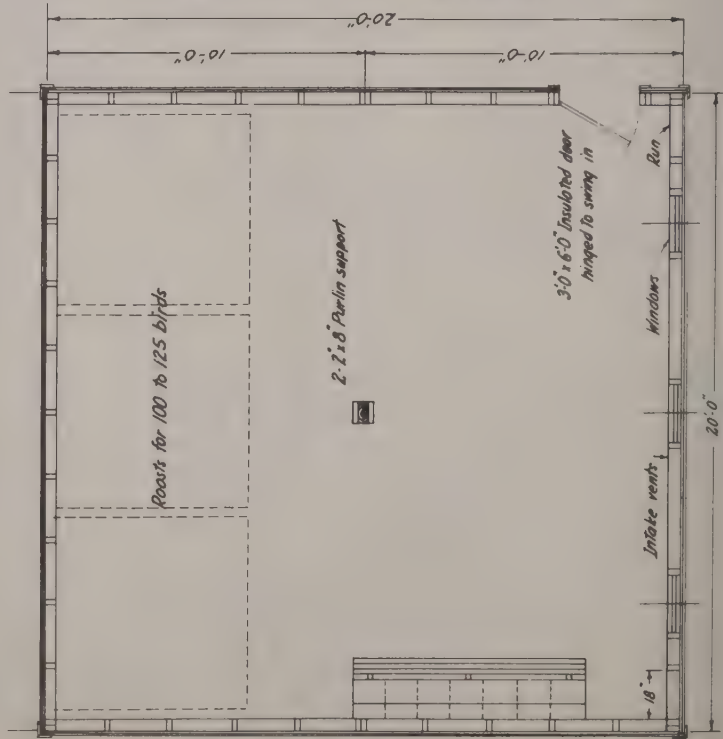




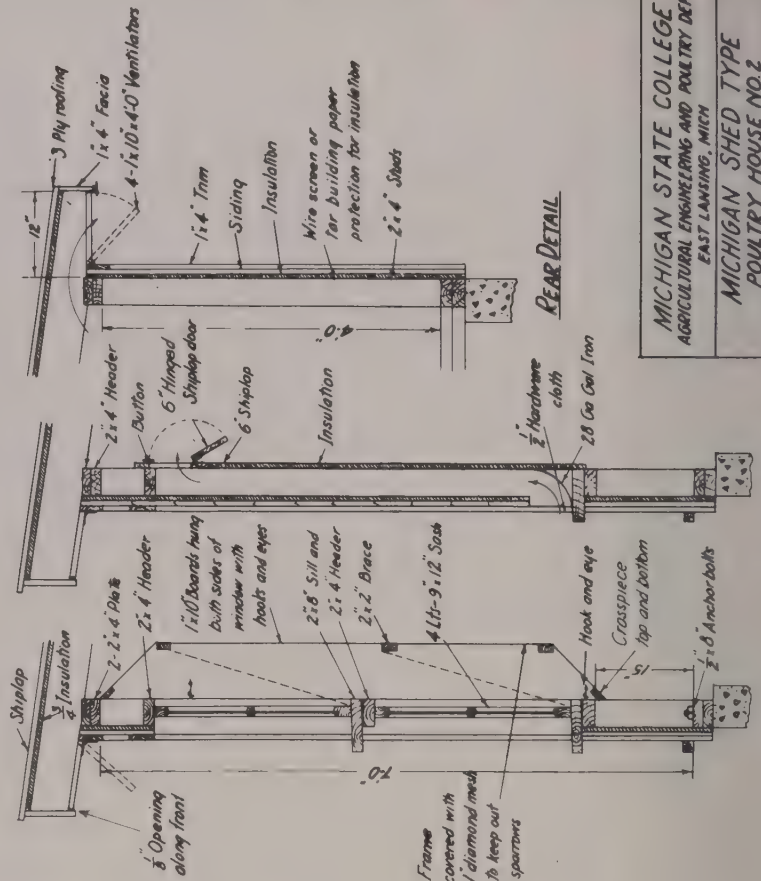
FRONT VIEW



CROSS SECTION



FLOOR PLAN

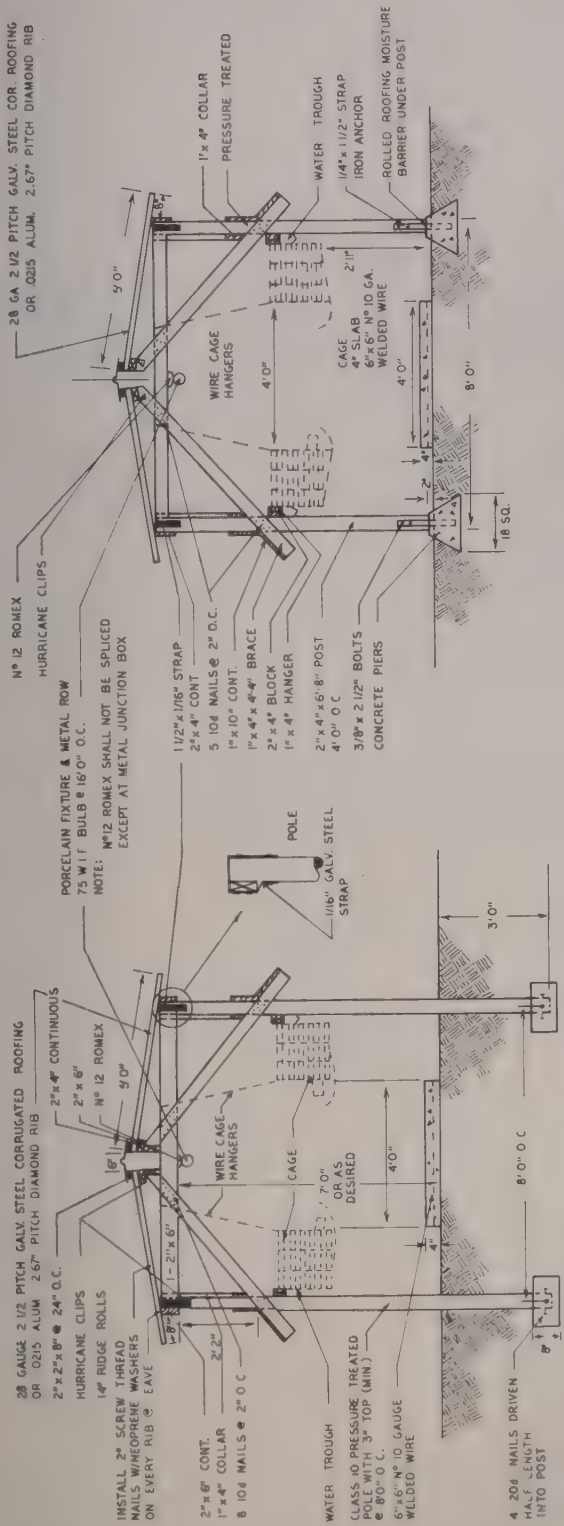


REAR DETAIL

WINDOW DETAIL

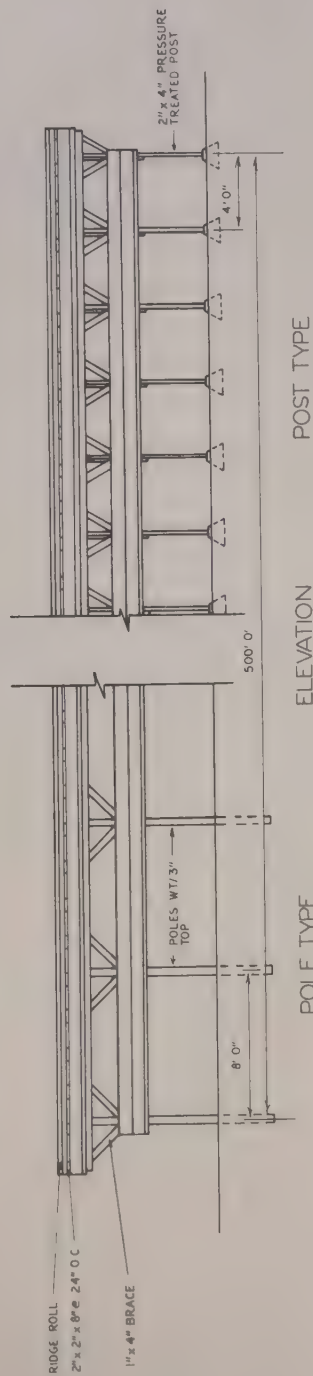
VENT DETAIL

MICHIGAN STATE COLLEGE AGRICULTURAL ENGINEERING AND POULTRY DEPT. EAST LANSING, MICH			
MICHIGAN SHED TYPE POULTRY HOUSE NO. 2			
Planned A. Bell	App. by J. W. M. 6-5-41	Sheet 1 of 1	
Drawn H. J. O.	Date 10-25-39		
Traced H. J. O.			



TWO ROW HOUSE (POLE TYPE)

TWO ROW HOUSE (POST TYPE)



- NOTE:
1. ALL EXPOSED LUMBER POLES & POSTS ARE TO BE PRESSURE TREATED
 2. 1X4 DIAGONAL BRACES ALONG EACH SIDE WALL AND UNDER ROOF RAFTERS ON ALL TYPES OF CONSTRUCTION.
 3. DESIGNED TO SOUTH FLORIDA BUILDING CODE REQUIREMENTS FOR FARM SERVICE BUILDINGS.

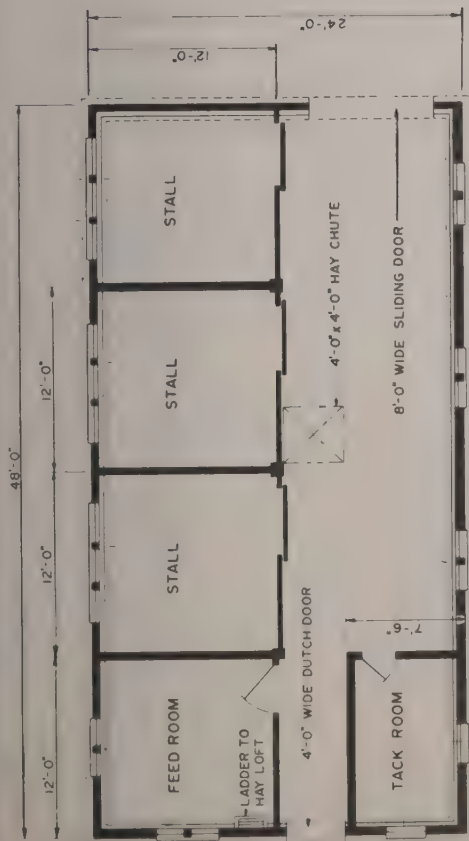
FLORIDA COOPERATIVE EXTENSION SERVICE
 UNIVERSITY OF FLORIDA
 UNIVERSITY OF FLORIDA & USDA COOPERATING

DATE 8-29-66
 DRAWN BY J. F. T.
 DESIGNED V. T. B.

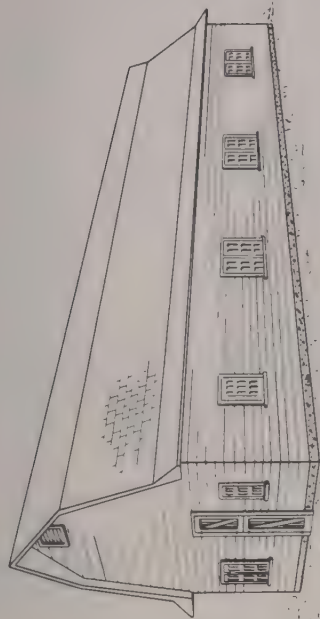
POLE TYPE HOUSE

Extension Agrl. Engineer - Gainesville, Fla.
 DRAWING NUMBER 1110.2

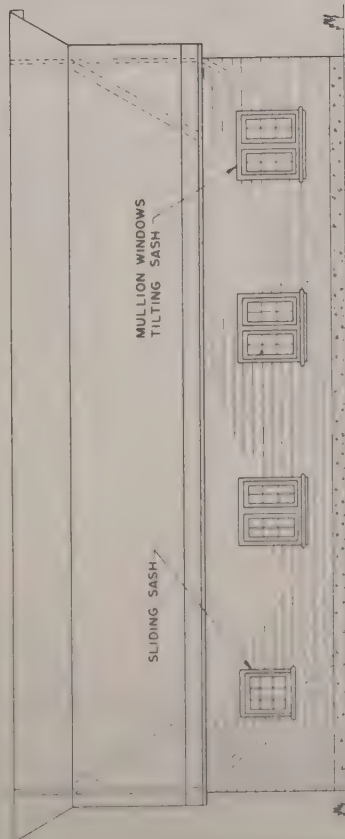
HORSE BARNS AND EQUIPMENT



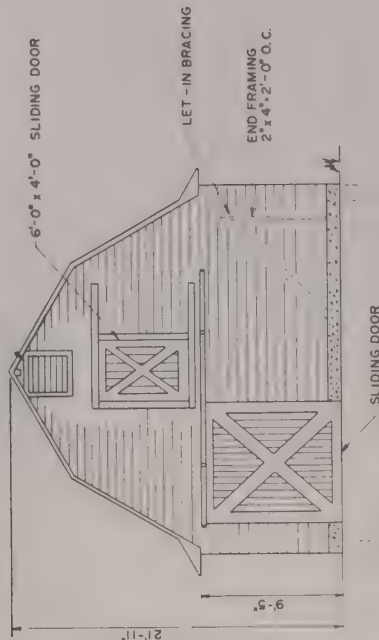
PLAN



PERSPECTIVE



SIDE ELEVATION



END ELEVATION

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

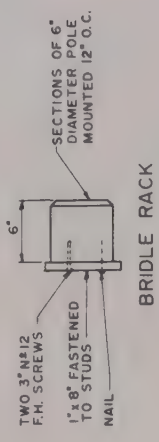
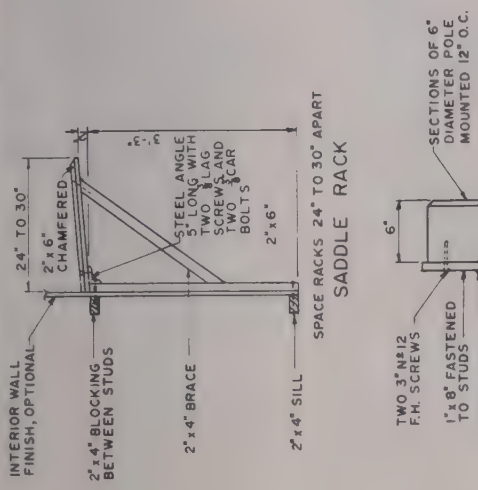
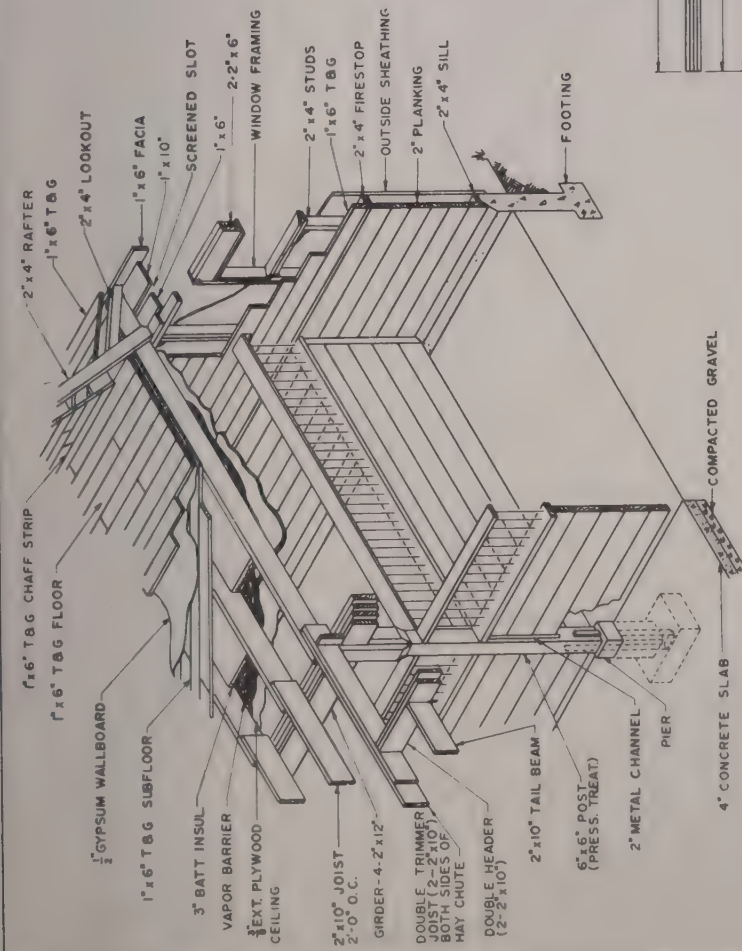
AND
N. J. TESTA, FERTILITY, AND RESEARCH

1 1/2 STORY HORSE BARN

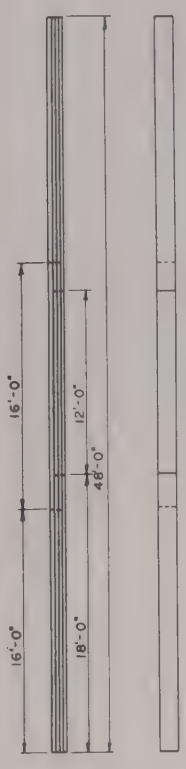
NJ '67 EX-6024 SHEET 1 OF 3

BASED ON N.J. PLAN N° 142

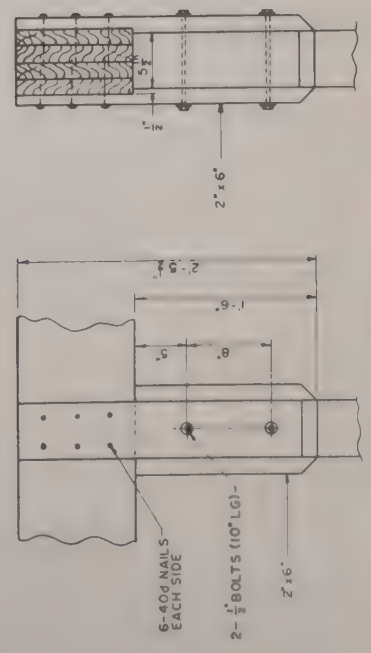
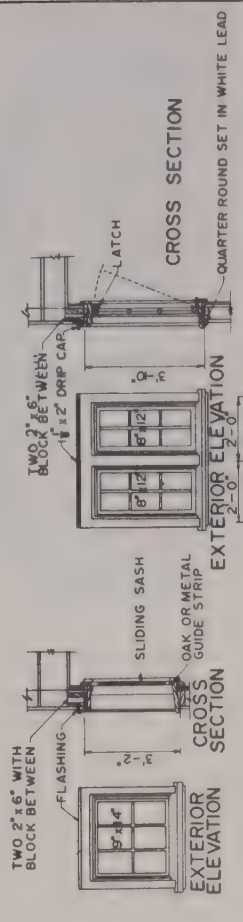
NOTE: SCALE 0 4 8 10



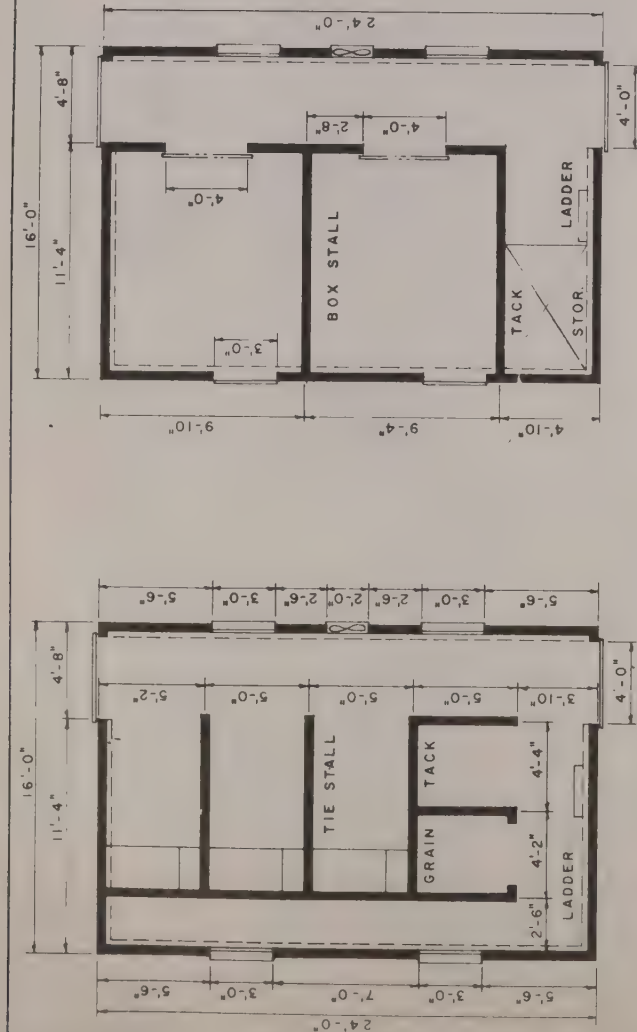
GIRDER LAMINATION DETAIL



CUTAWAY ISOMETRIC VIEW



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS		
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
1 1/2 STORY HORSE BARN		
N J '67	EX 6024	SHEET 3 OF 3



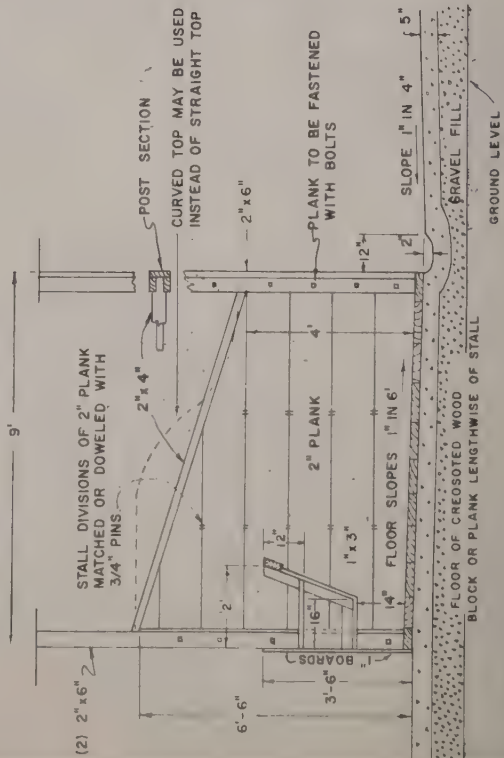
TIE STALL FLOOR PLAN

BOX STALL FLOOR PLAN

NOTES

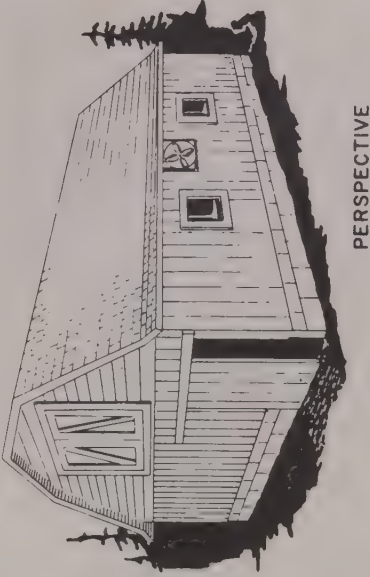
- VENTILATION — PROVIDE 100 cfm PER HORSE WITH SMALL VENTILATION FAN FOR EACH HORSE. LOCATE HOLES CLOSE TO OUTSIDE WALL OPPOSITE FAN. CONTROL FAN PREFERABLE WITH THERMOSTAT SET AT 40° TO 42° F DURING WINTER MONTHS. OPERATE FAN MANUALLY DURING EXTENDED COLD SPELLS IF FROST APPEARS IN BARN AS HUMIDITY BECOMES EXTREMELY HIGH.
- HAY STORAGE — OVERHEAD MOW PROVIDES STORAGE FOR APPROXIMATELY 125 BALES OR 3 1/2 TO 4 TONS OF HAY.
- WATER — CLOSE TRAP DOOR TO HAY MOW DURING COLD MONTHS OF YEAR. PROVIDE OUTSIDE WATERING TANK FOR TIE STALL ARRANGEMENT. PROVIDE INSIDE FROST PROOF HYDRANT WITH BOX STALLS — WATER HORSES WITH BUCKET.
- LIGHTS — PROVIDE AT LEAST 2 OVERHEAD LIGHTS FOR EACH ALLEY AND HAY MOW ALSO. PROVIDE LIGHTS NEAR LADDER AND TACK STORAGE AREA.
- DOORS — ALL DOORS TO OUTSIDE SHOULD BE 4 FEET WIDE. OUTSIDE DOORS TO BOX STALLS ARE OPTIONAL.
- ROOF — EITHER ASPHALT SHINGLES OR METAL CAN BE USED FOR ROOF. (SEE DETAILS ON SHEET 2.)

NOTE: CONSULT LOCAL HEALTH AND BUILDING CODE AUTHORITIES BEFORE STARTING CONSTRUCTION

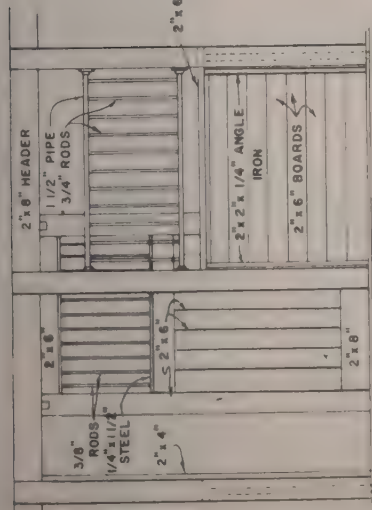


NOTE: STALLS 5' WIDE. FEED BOX 12" WIDE

TIE STALL CROSS SECTION

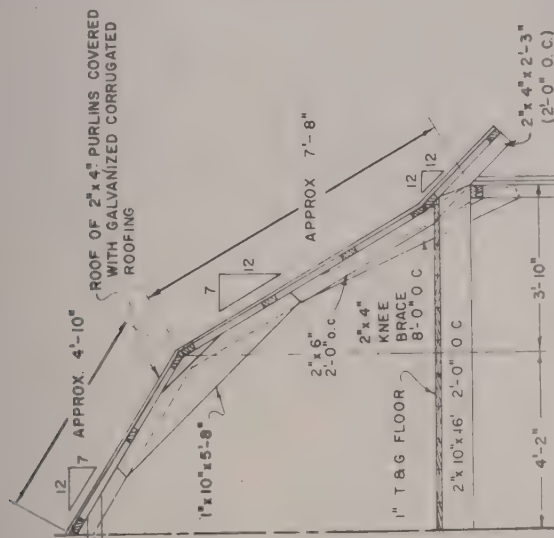


PERSPECTIVE



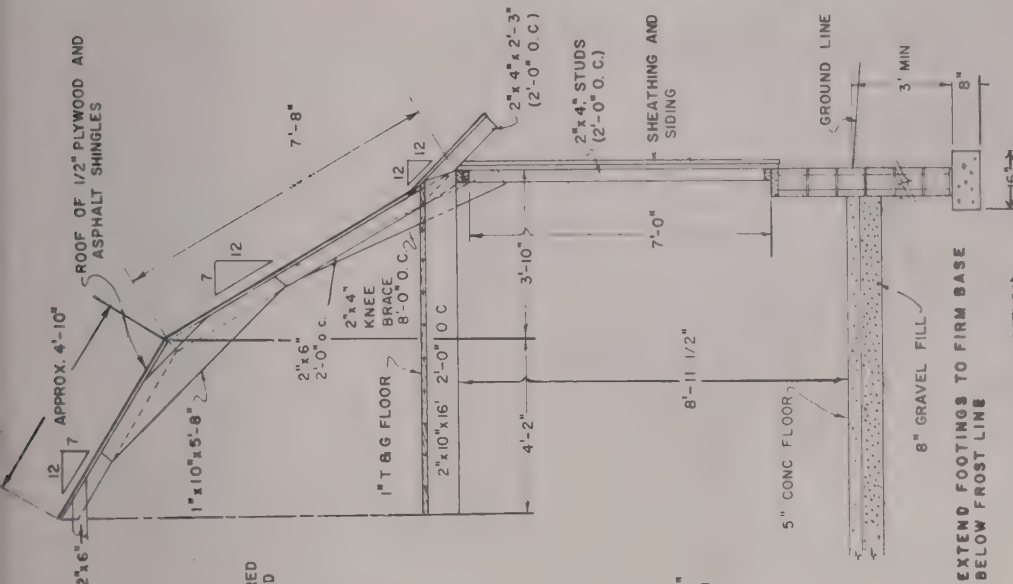
FRONT VIEW

BOX STALL DETAILS



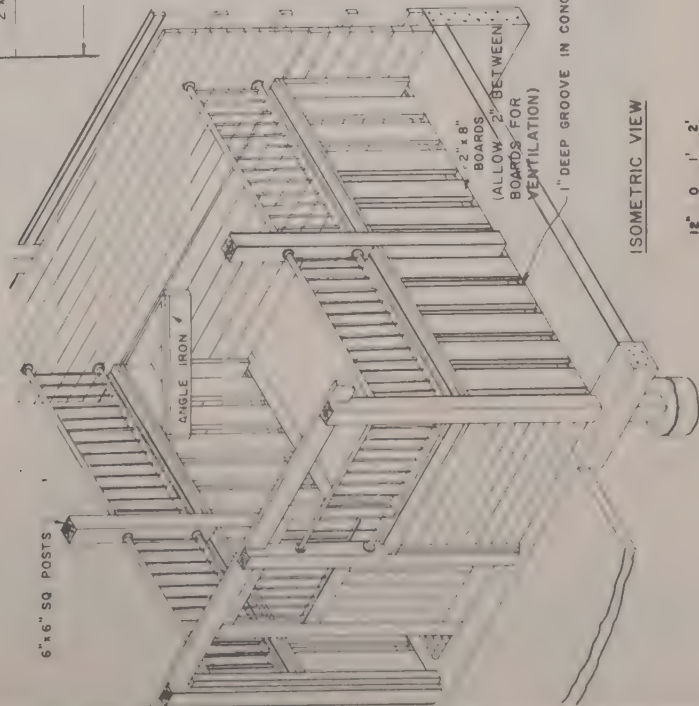
HALF END SECTION

GALVANIZED CORRUGATED ROOFING



HALF END SECTION

ASPHALT SHINGLES



ISOMETRIC VIEW

12" 0' 1' 2'

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE

HORSE BARN
GAMBREL ROOF

MICH. '76 6 262 SHEET 2 OF 2

PERSPECTIVE

TYPICAL CROSS SECTION A-A

ALTERNATE ROOF

THIS STEEPLY PITCHED ROOF PROVIDES NOW SPACE FOR STORAGE OF ADDITIONAL FEED & BEDDING, ALSO IS RECOMMENDED FOR USE WHEN NEEDED TO CONFORM TO THE APPEARANCE OF HEARTY BUILDINGS.

REAR ELEVATION

RIGHT END ELEVATION

PLAN

GENERAL NOTES:

THIS BUILDING IS DESIGNED FOR USE IN AREAS WHERE SNOW LOAD DOES NOT EXCEED 30 POUNDS PER SQUARE FOOT AND WIND DOES NOT EXCEED 100 MPH.

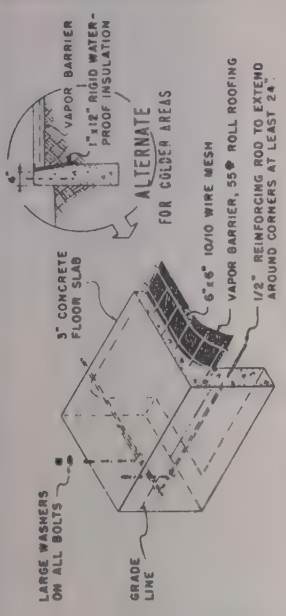
- FOR AREAS WHERE THE SNOW LOAD DOES NOT EXCEED
20 LBS. PER SQ. FT., SPACE RAFTERS 2' 0" O.C., USE
THE TWO 2" x 8" GIRDER.

FOR SLOPE LOADS UP TO 30 LBS. PER SQ. FT., SPACE
RAFTERS 16" O.C. AND USE A THREE 2" x 8" GIRDER.

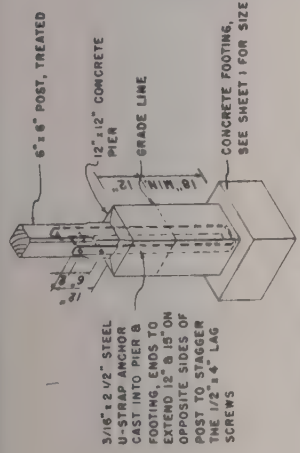
REGARDLESS OF SNOW LOAD, IF THE AREA IS SUBJECT
TO 35 PSF OF WINDGANE FORCE, OVER 76 MPH, USE THE
THREE 2" x 8" GIRDER SYSTEMS AND PIER
FOOTINGS SHOWN IN PARENTHESIS.
- STALL WINDOWS -
MODERATE WINDS...USE THREE 2"x8", AS SHOWN
COLD " " " ONE " "
FOUNDATION WALLS AND PIER FOOTINGS MUST BE DEEP
ENOUGH TO BEAR ON SOLID GROUND, BELOW FROST-
LINE

NOTE:

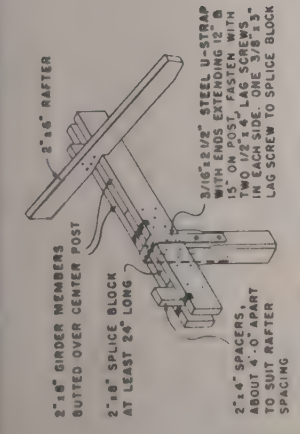
F MOW IS USED, THE SMALLER ROOM AT RIGHT MAY BE USED FOR FEED STORAGE AND THE LARGER ROOM AT LEFT FOR JACK AND BUNK ROOM.



FOUNDATION & FLOOR DETAIL AT CORNER
FOR FEED & TACK ROOMS



FOOTING, PIER & POST DETAIL

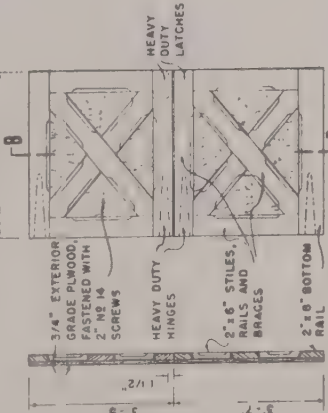


POST, GIRDER & RAFTER DETAIL

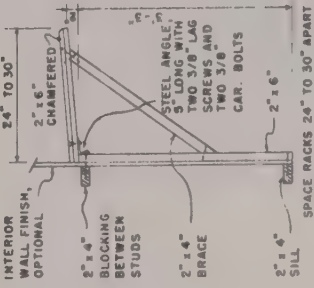
THE THREE PART GIRDER IS SIMILAR EXCEPT THE CENTER MEMBER JOINT SHALL BE 18" TO 30" FROM CENTER POST.



JAMB DETAIL



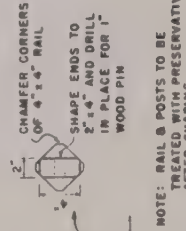
SECTION B-B STALL DOOR DETAILS



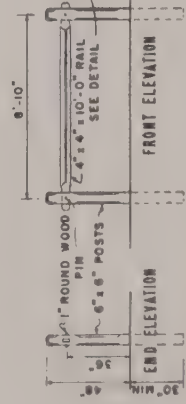
SADDLE RACK



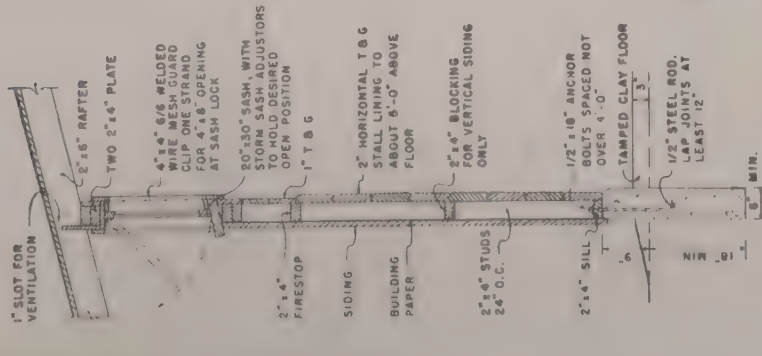
BRIDLE RACK



HITCHING RAIL

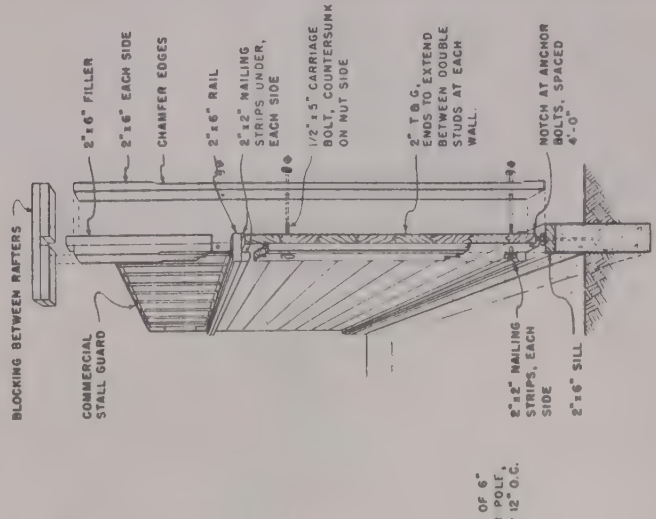


FRONT ELEVATION
END ELEVATION



FOUNDATION, WALL & STALL WINDOW
DETAIL

CUTAWAY SECTION
STALL PARTITION

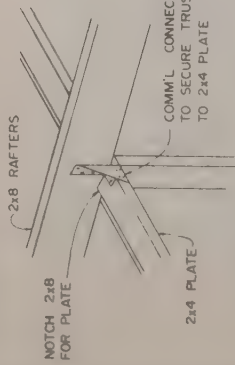


COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

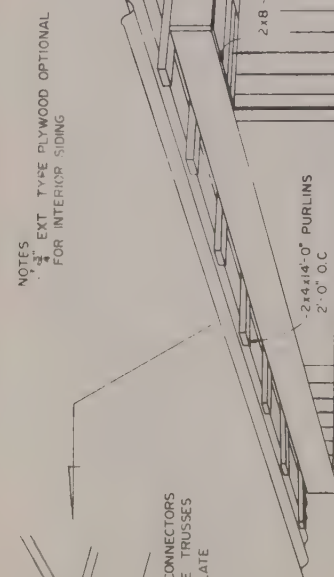
UNITED STATES DEPARTMENT OF AGRICULTURE

RIDING HORSE BARN

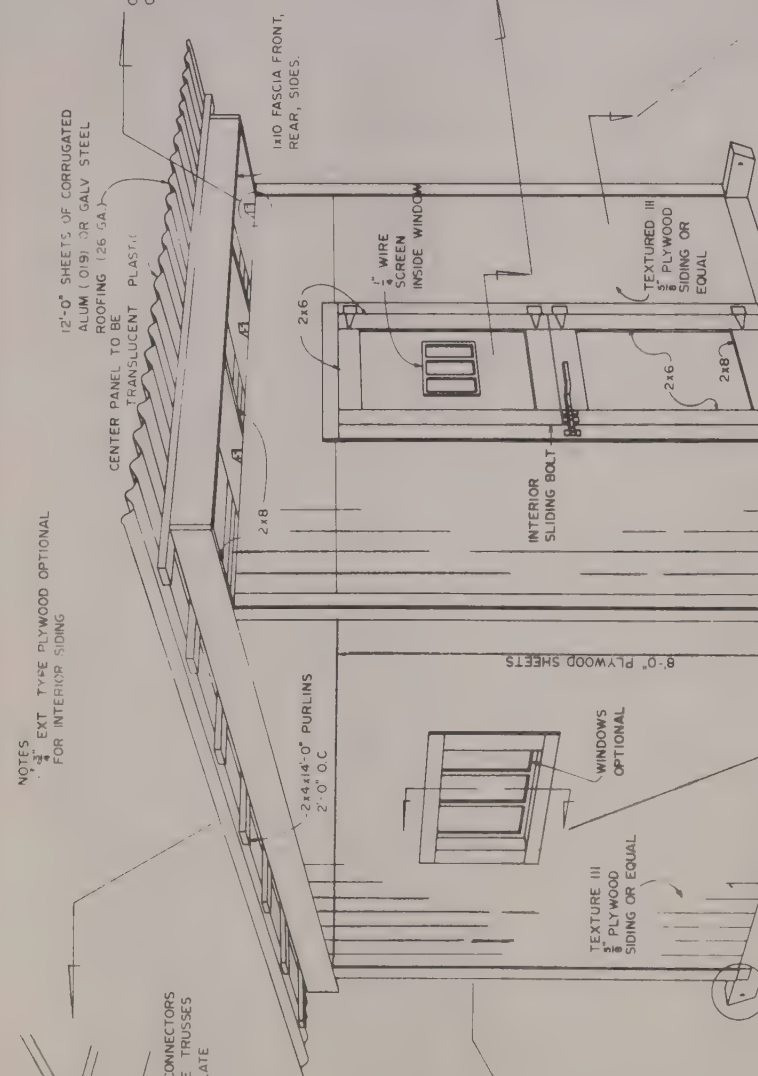
USDA '37 EX. 5838 SHEET 2 OF 2



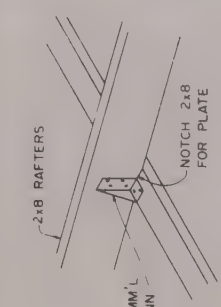
① DETAIL



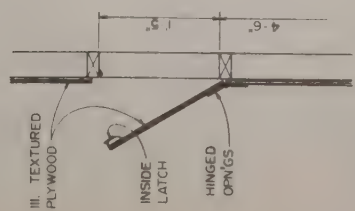
② DETAIL



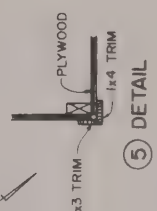
③ DETAIL



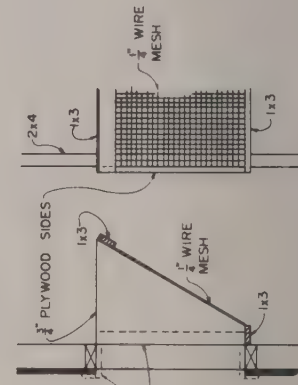
③ DETAIL



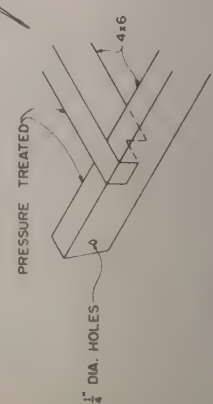
④ SECTION AT DOOR



⑤ DETAIL



⑥ WINDOW GUARD SECTION



⑦ DETAIL

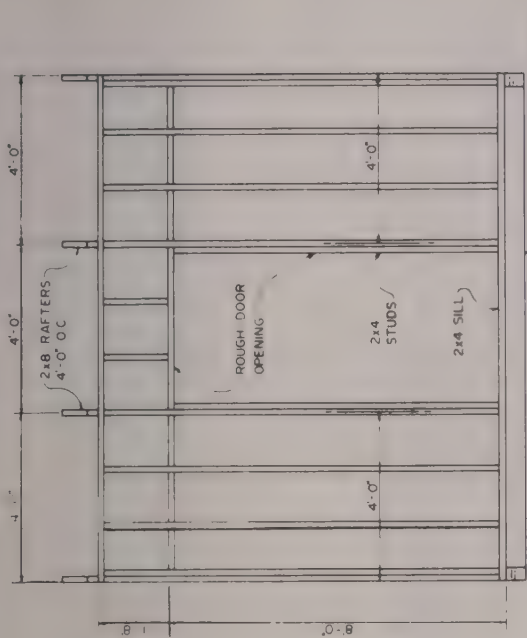
⑧ PARTIAL ELEV.

12'-0" SHEETS OF CORRUGATED ALUM OR GALV STEEL ROOFING WITH CENTER SECTION TRANSPARENT PLASTIC PANELS

2x4x12'-0" PURLINS 2'-0" O.C.

2x8x12'-0" RAFTERS 4'-0" O.C.

1x10 FASCIA BOARDS FRONT AND REAR



MATERIAL LIST

6-ALUM OR GALV STEEL ROOFING SHEETS (26"x14'4")

1-TRANSLUCENT ROOF SHEET

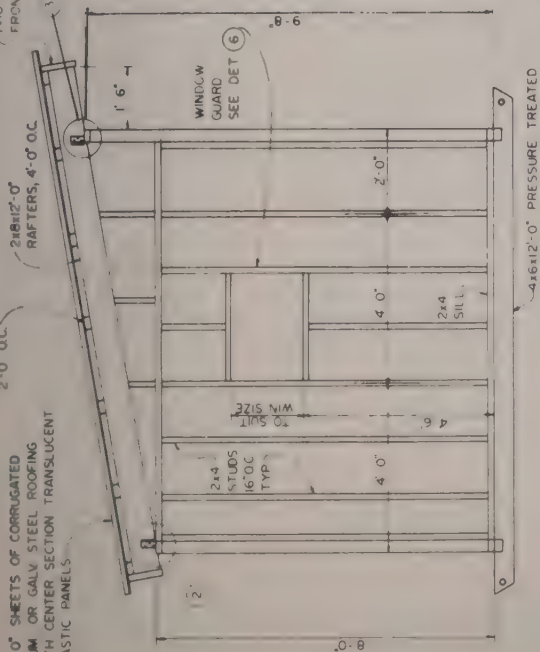
LUMBER

- 7-2x4x14'-0"
- 4-2x4x12'-0"
- 12-2x4x10'-0"
- 36-2x4x8'-0"
- 4-2x8x12'-0"
- 2-4x6x12'-0" PT
- 2-4x6x12'-0" PT
- 2-1x10x14'-0"
- 2-1x10x12'-0"
- 5-1x3x10'-0"
- 8-1x4x10'-0"
- 3-3/4x4x8'-0"

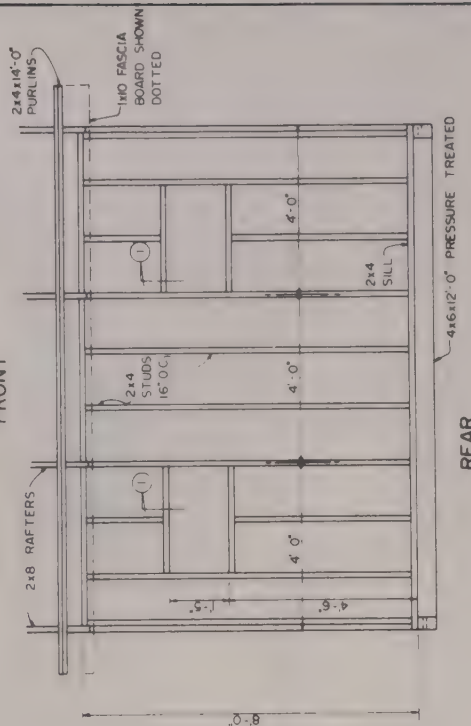
MISCELLANEOUS

- 8 COMMERCIAL CONNECTORS
- 1 DOOR (MATT. AS REQ'D)
- 4 HEAVY DUTY T-HINGES
- 2 LATCHES FOR REAR OPNG'S
- 2-16"x32" 3 LITE WINDOWS OPT'L
- NAILS, LAG SCREWS, ETC. AS REQ'D

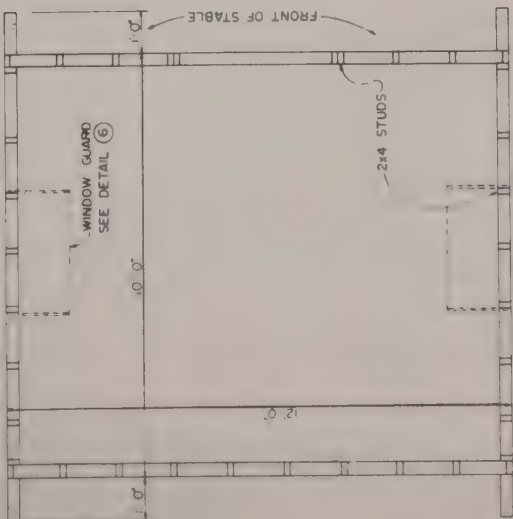
SIDES



FRONT



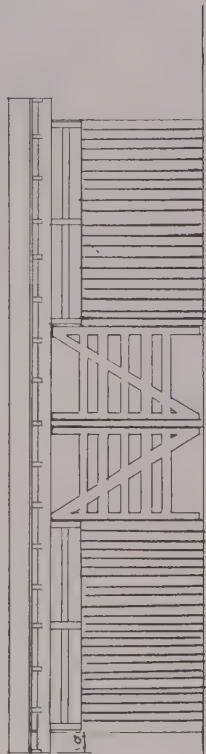
REAR



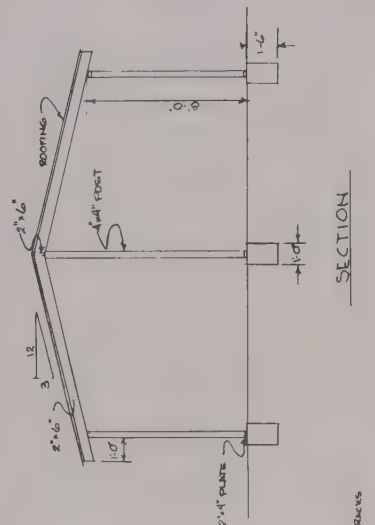
PLAN

FRAMING DETAILS

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS STATE OF GEORGIA	
UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE AND MECHANICAL ARTS UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING	
PORTABLE STABLE FOR A HORSE	
N.J. '69	6082
SHEET 2 OF 2	

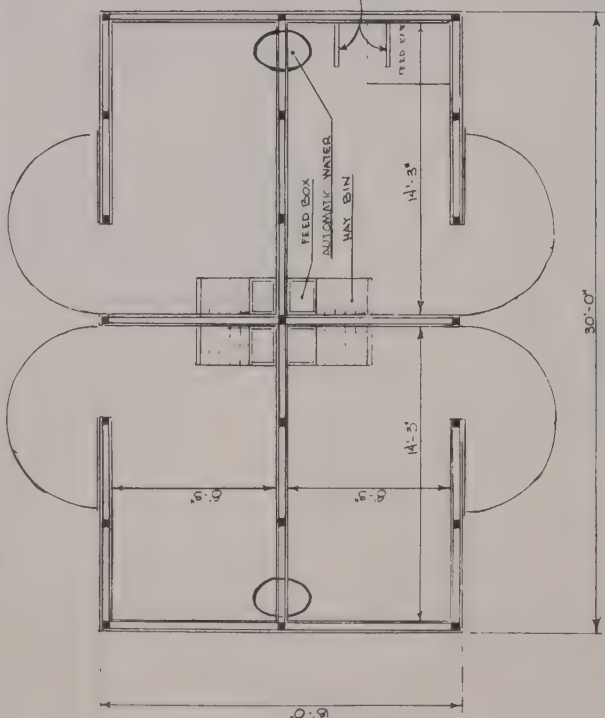


SIDE VIEW_



SECTION

NOTE: FEED BOX AND SADDLE RACK OPTIONAL FOR FOURTH STABLE USED AS TACK ROOM

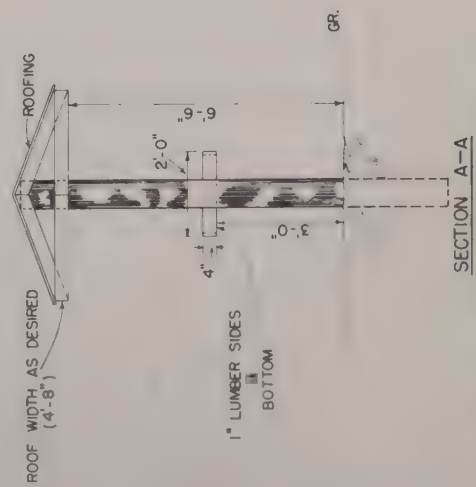
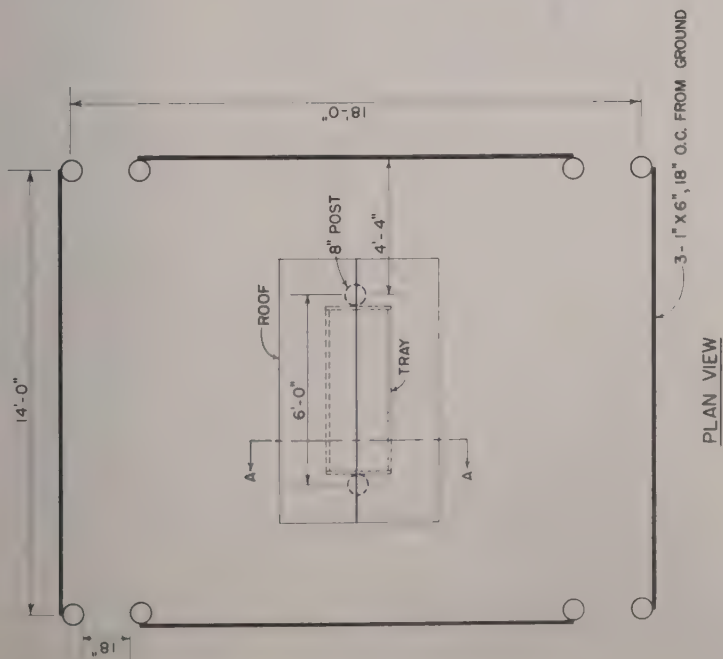


FLOOR PLAN

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICSWASHINGTON STATE
UNIVERSITY

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

TEXAS HORSE BARN
PLAN NO. 437. (ADAPTED FROM PLAN
BY TEXAS A&M UNIVERSITY) 11-30-67

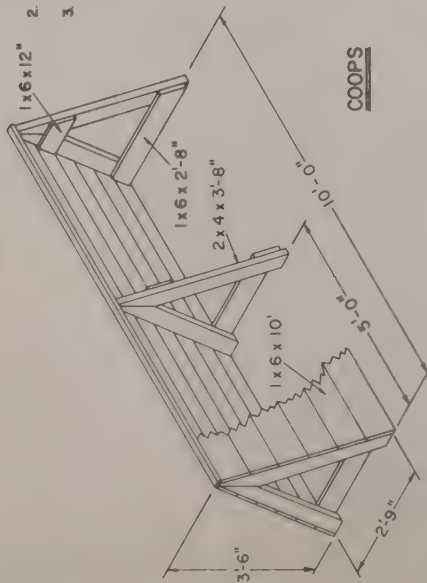


PERSPECTIVE

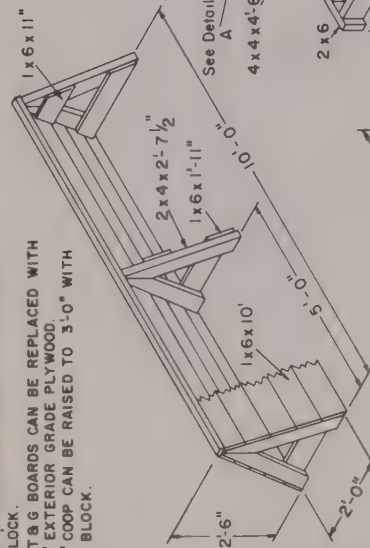
COOPERATIVE EXTENSION SERVICE			
AGRICULTURAL ENGINEERING DEPARTMENT			
VIRGINIA POLYTECHNIC INSTITUTE AND			
STATE UNIVERSITY BLACKSBURG VIRGINIA			
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING			
STATION			
CREEP FEEDER FOR COLTS			
JAN 1975	D-125	SHEET 1 OF 1	
DES. BY	JED		

NOTE:

1. 3'-6" COOP CAN BE RAISED TO 4'-0" WITH A 6" BLOCK.
2. 1x6 T&G BOARDS CAN BE REPLACED WITH 3/4" EXTERIOR GRADE PLYWOOD.
3. 2'-6" COOP CAN BE RAISED TO 3'-0" WITH A 6" BLOCK.



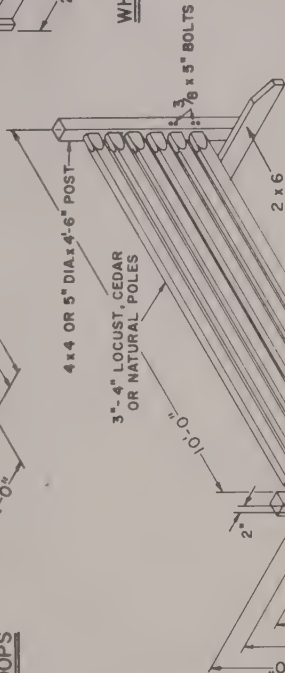
COOPS



DETAIL - A

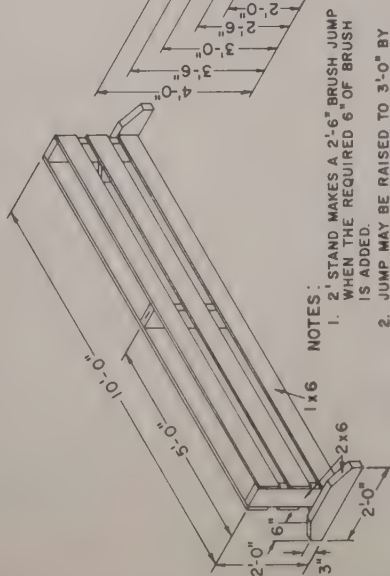


WHITE RAIL JUMP



NATURAL RAIL (HUNTERS) JUMP

BOTTOM TWO RAILS BOLTED TO STABILIZE JUMP.

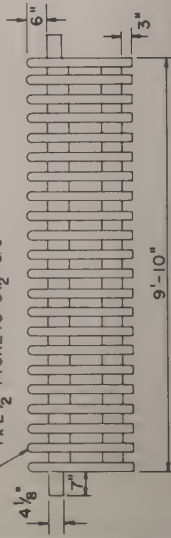


NOTES:

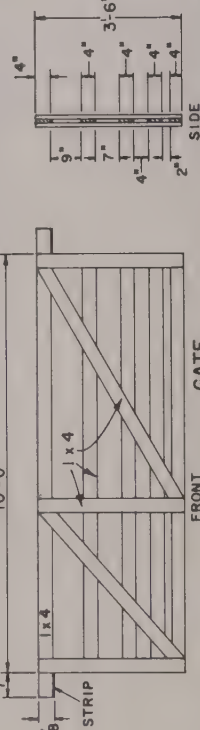
1. 2' STAND MAKES A 2'-6" BRUSH JUMP WHEN THE REQUIRED 6" OF BRUSH IS ADDED.
2. JUMP MAY BE RAISED TO 3'-0" BY SETTING ON 6" BLOCKS.
3. A 3'-6" JUMP CAN BE MADE BY USING 3'-0" UPRIGHTS, AND 4, 1x6 BOARDS ON EACH SIDE SPACED 10" O.C.

BRUSH JUMP

1x2 1/2" PICKETS 5 1/2" O.C

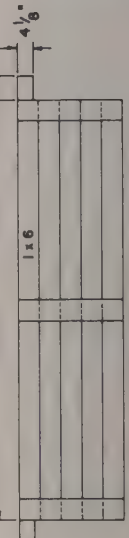


PICKET JUMP



GATE

FRONT 10'-0" SIDE 7'-0"



FRONT

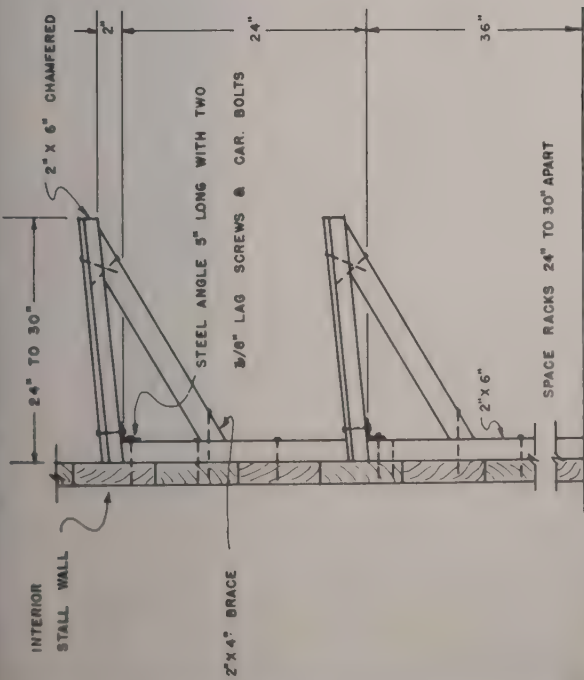
PLANK

SIDE

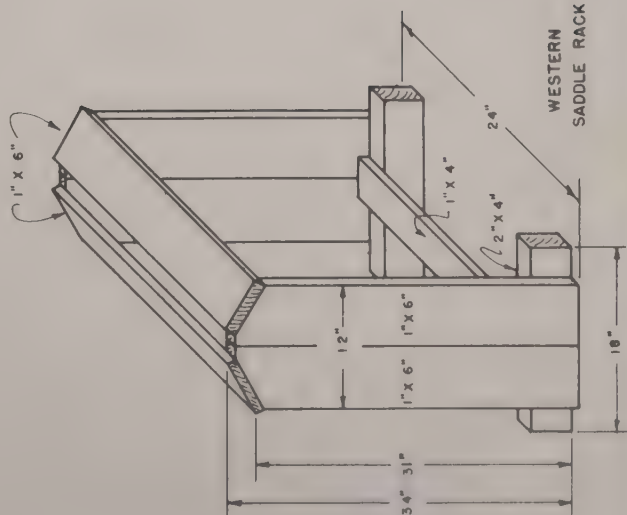
NOTE:

1. GATE SIZE ADJUSTED FOR USE WITH WHITE RAIL JUMP POST.
2. FOR FINISHED LUMBER A 1x4 STRIP WILL BE 3-5/8" WIDE. A 1/2" STRIP WILL BE NECESSARY FOR THE FULL 4-1/8" WIDTH.

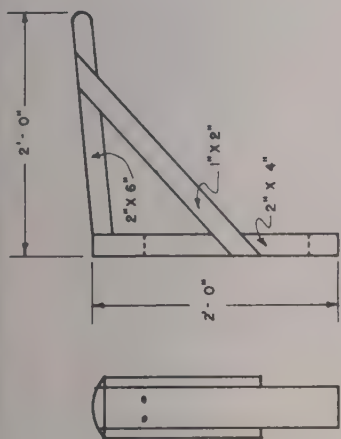
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
STATE OF NORTH CAROLINA
BIOLOGICAL AND AGRICULTURAL ENGINEERING DEPT
N.C. STATE UNIVERSITY AT RALEIGH
AND
U.S. DEPT OF AGRICULTURE COOPERATING



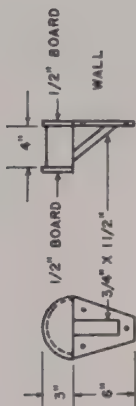
SADDLE RACK



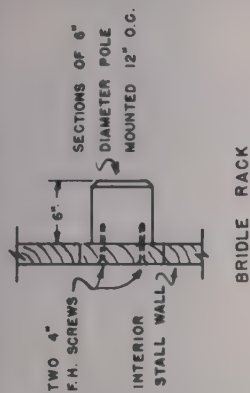
WESTERN SADDLE RACK



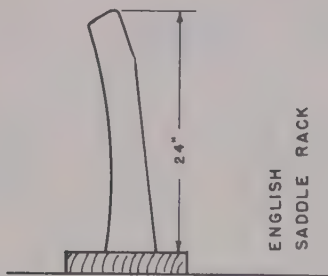
ENGLISH SADDLE RACK



BRIDLE RACK



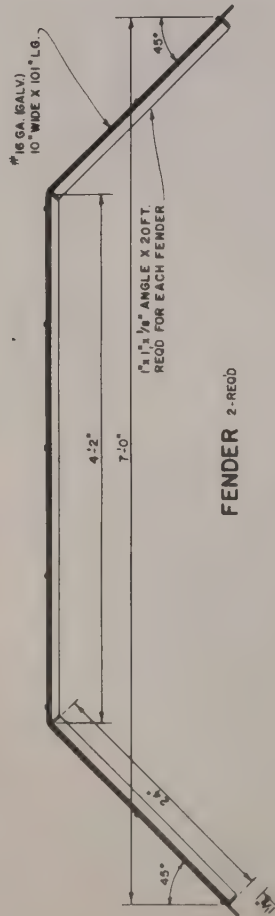
BRIDLE RACK



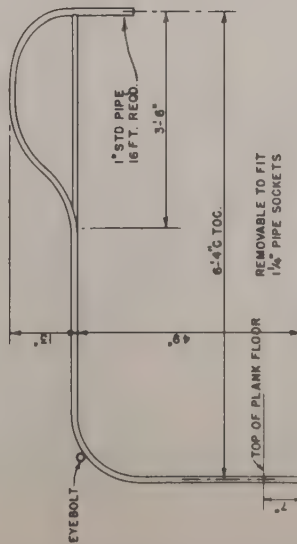
ENGLISH SADDLE RACK

The tack room needs to be large enough so that you can get around saddle racks and to other storage space easily. You will need cabinets for drugs, brushes, combs and other supplies.

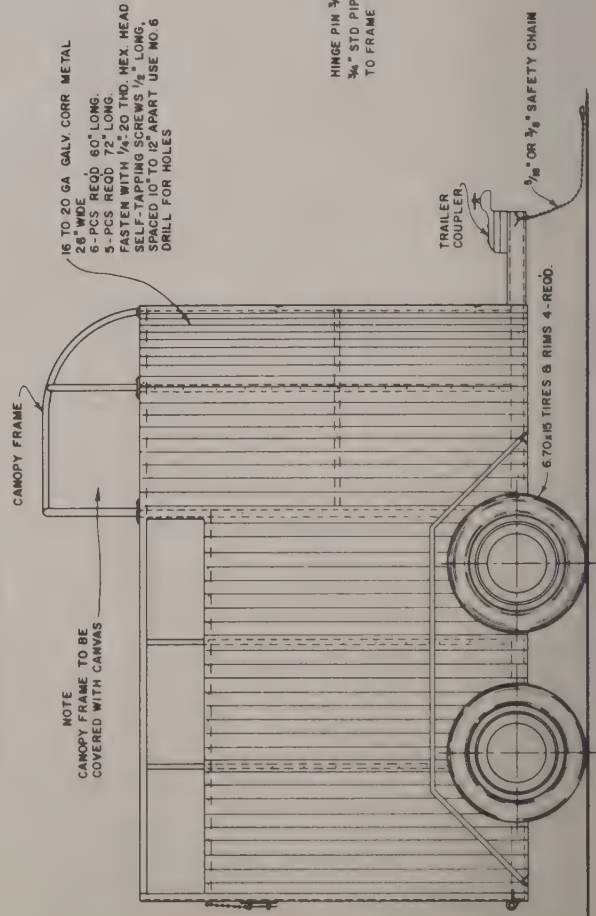
To keep your saddles in proper shape, design racks for individual saddles. Provide racks or pegs for halters and bridles. Several types of each are shown. They are easy to make and are ideal for tack rooms.



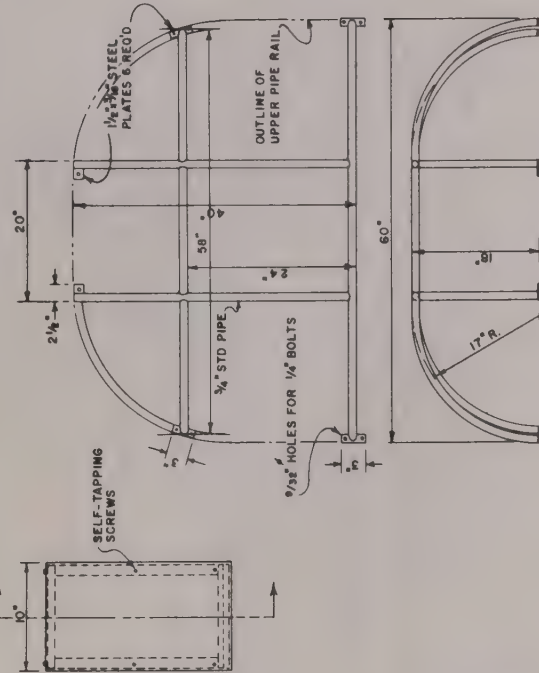
FENDER 2-REOD



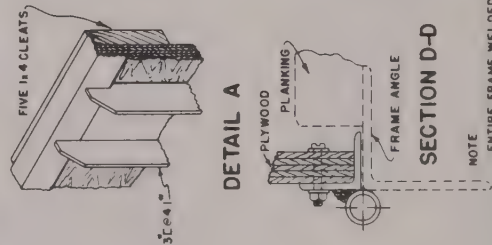
SEPARATOR 1-REOD



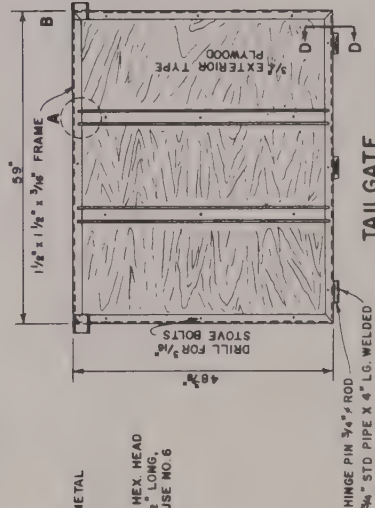
SIDE ELEVATION OF TRAILER



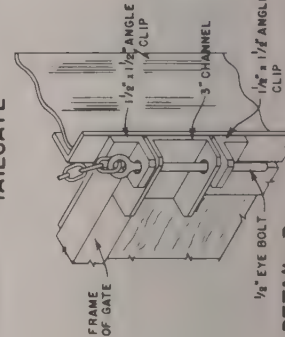
CANOPY FRAME 1-REOD



DETAIL A



TAILGATE



DETAIL B

NOTE
ENTIRE FRAME WELDED

SECTION D-D

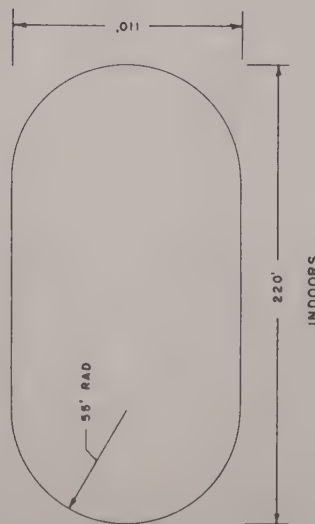
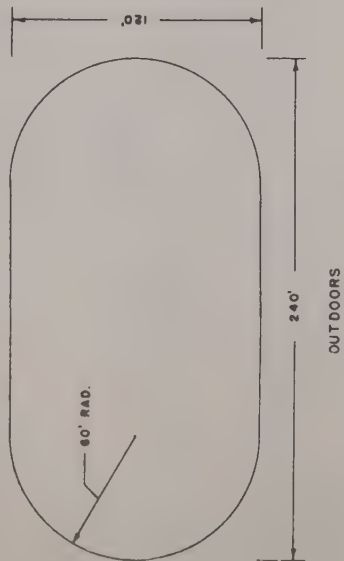
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

TWO-HORSE TRAILER
FOUR WHEEL, TANDEM AXLE

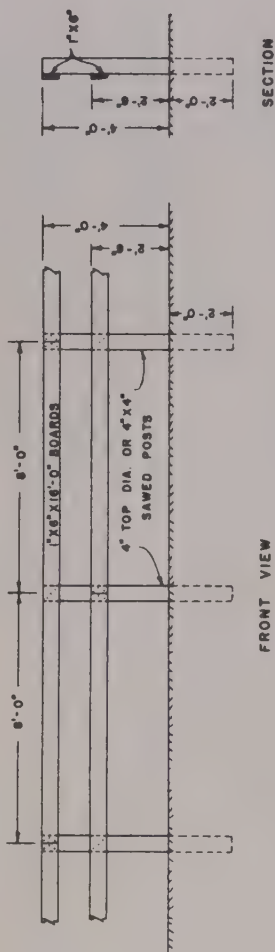
ORE 162 EX. 5943 SHEET 1 OF 2

NOTE
CORRUGATED FILLER STRIP TO BE USED
BETWEEN MOBILE AND MAIN FENDER.
EXTEND FENDER TO FRAME OF TRAILER.

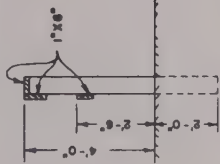


HORSE SHOW RINGS

SIZES RECOMMENDED BY THE NATIONAL HORSE SHOW ASSOCIATION

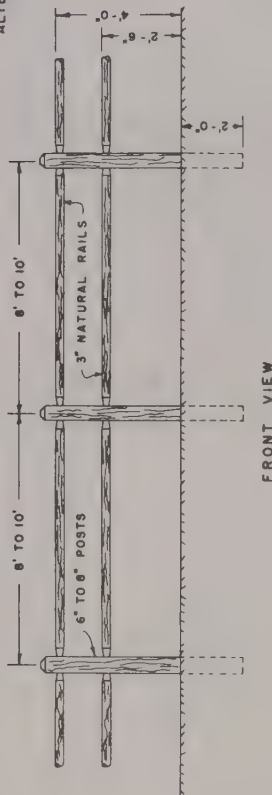


SECTION



BOARD FENCE DETAIL

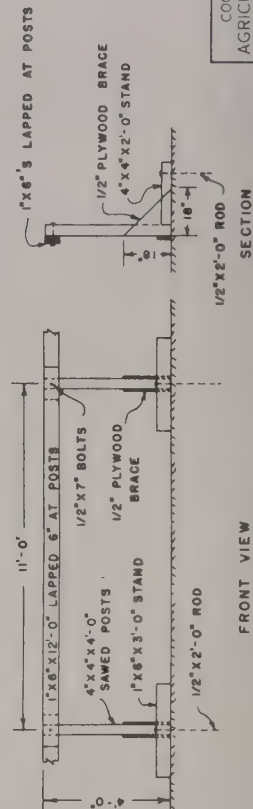
ALTERNATE SECTION



FRONT VIEW

NATURAL RAIL FENCE DETAIL

SECTION



SECTION

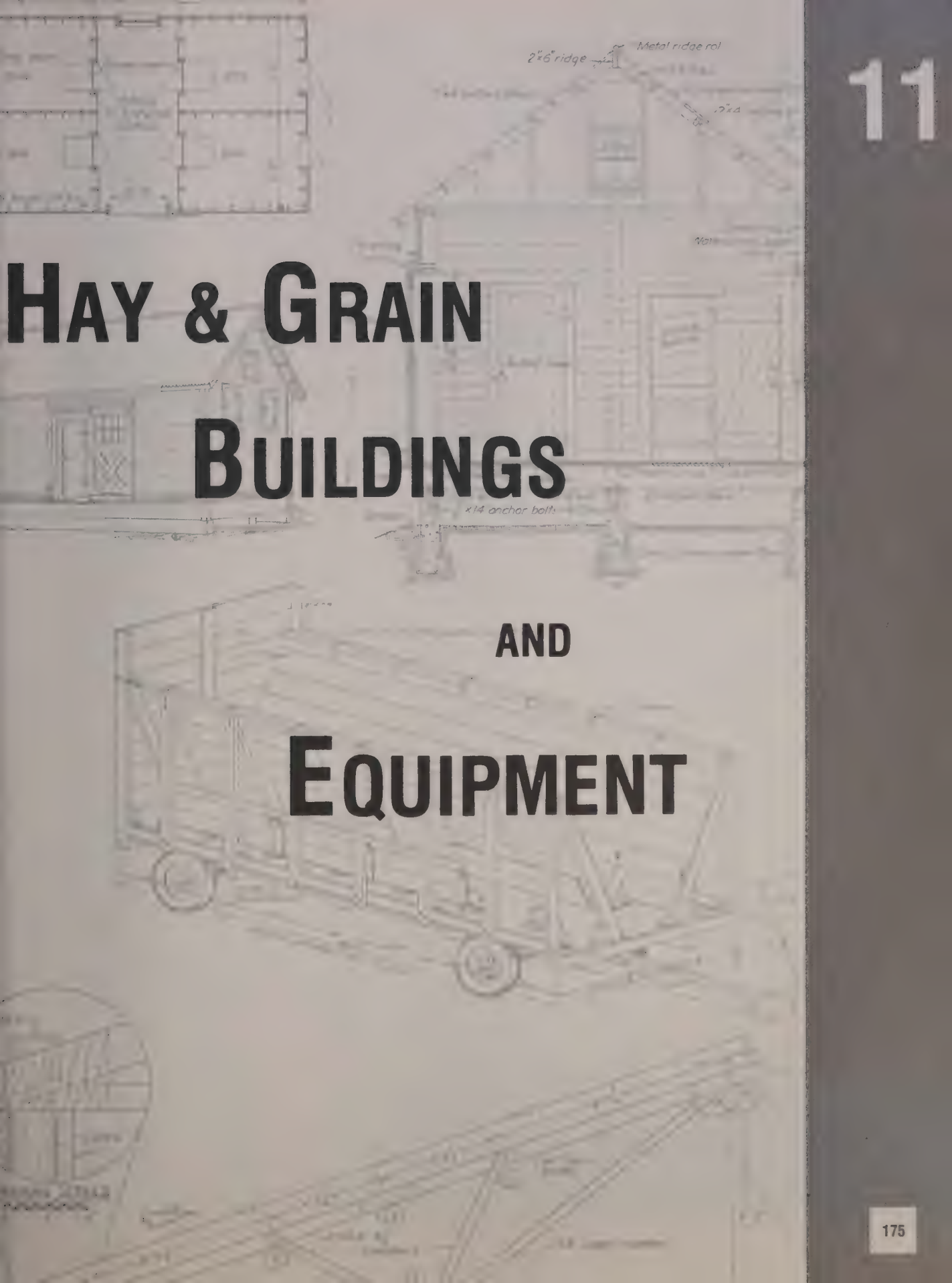
MOVABLE FENCE DETAIL

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF FLORIDA
UNIVERSITY OF FLORIDA
GAINESVILLE, FLORIDA

HORSE SHOW RINGS

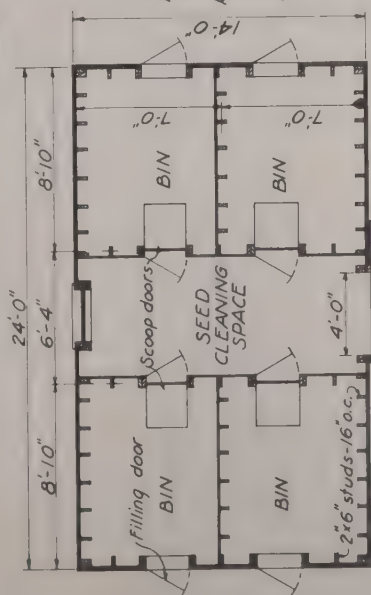
VA. '67 EX 6015 SHEET 1 OF 1

V.P.I. VA. PLAN D-141

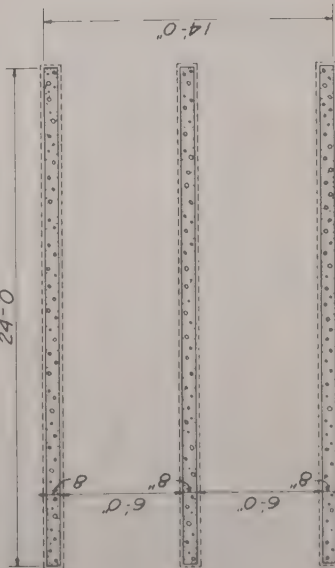
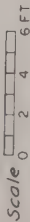
The background of the cover features several faint architectural drawings. At the top left is a floor plan of a rectangular building. To its right is a side elevation of a building with a gabled roof, showing structural details like rafters and a ridge. Below the floor plan is a cross-section of a building, showing internal structural elements. In the center is a perspective drawing of a large, open-sided hayrack or grain bin, showing its wooden frame and slatted sides. At the bottom left is a circular detail drawing, possibly of a wheel or a joint. The title text is overlaid on these drawings.

HAY & GRAIN BUILDINGS AND EQUIPMENT

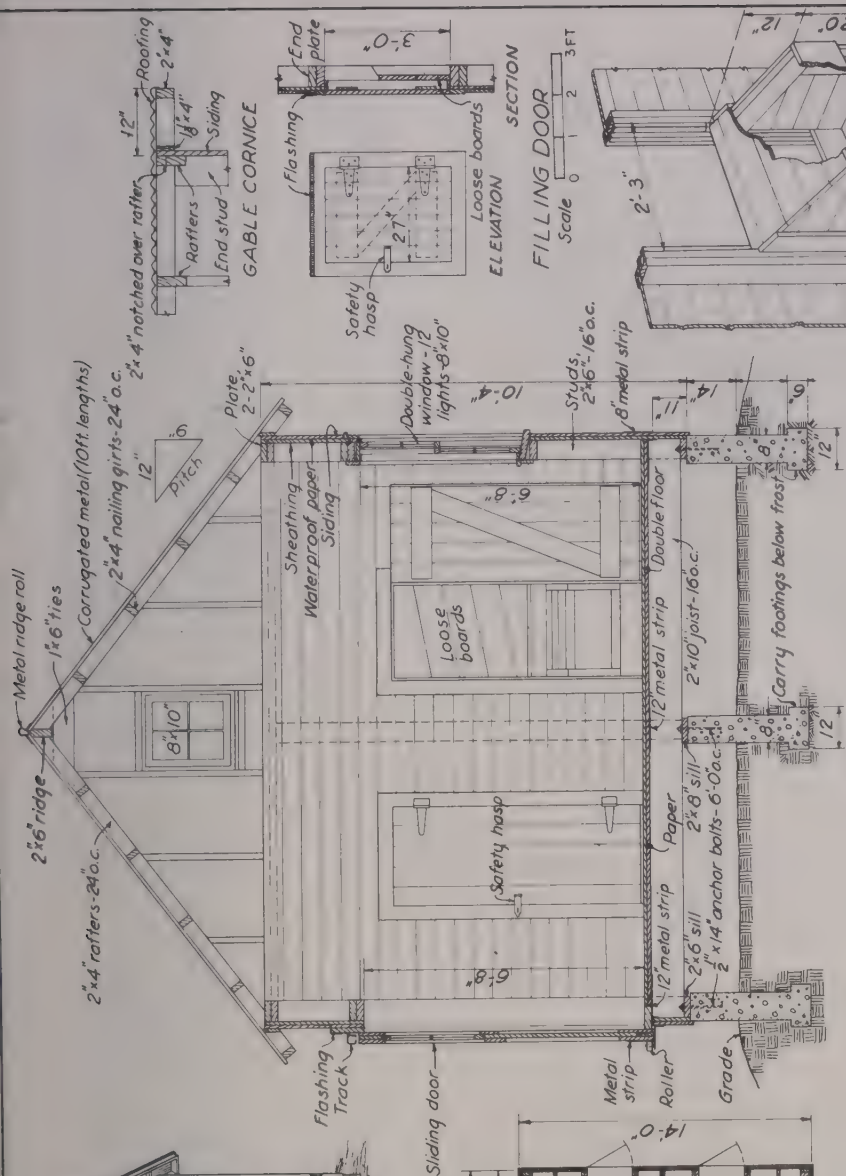
PERSPECTIVE



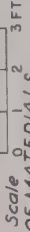
PLAN



FOUNDATION PLAN



CROSS SECTION



BILL OF MATERIALS

5 cu. yds. 1:2½:5 concrete - 30 bags cement, 3 cu. yds. 23 - 2"x10"x14'-0" - floor joists.

2 - 2"x8"x12'-0" - sills.
117 - 2"x6"x10'-0" - studs, headers, plates.
12 - 2"x6"x12'-0" - sills & plates.

10 - 2"6" x 14'-0" - plates & ridge.
48 - 2"4" x 10'-0" - rafters, nailing girts, etc.

- sheathing - 1" x 6", walls.
- siding - exterior walls.
- corner boards, exterior.

2300 ft. D.M. 1.60.

1000 ft. B.M.

170 lin. ft. 16¹⁸/₄"

- 50 lin. ft. $1\frac{1}{2} \times 3$ corner boards.
- 10 lin. ft. $4\frac{1}{2} \times 10$ top casing for sliding door.
- 14 lin. ft. 1×8 sliding door casing.

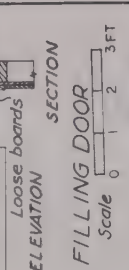
- trim, interior casing, L
- sill for sliding door
- sliding door

1- 12-8"x10"light - double-hung sash & frame.
2- 4-8"x10"light - single sash & frame.

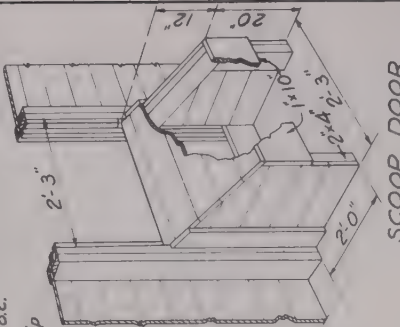
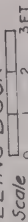
- 8 - 210 ft. rolls
- 26 sheets
- 26 lin. ft.

- galv. metal strips-12"
- galv. metal strips-8"
- anchor bolts with nuts

Paint, nails & door hardware not included in



ELEVATION



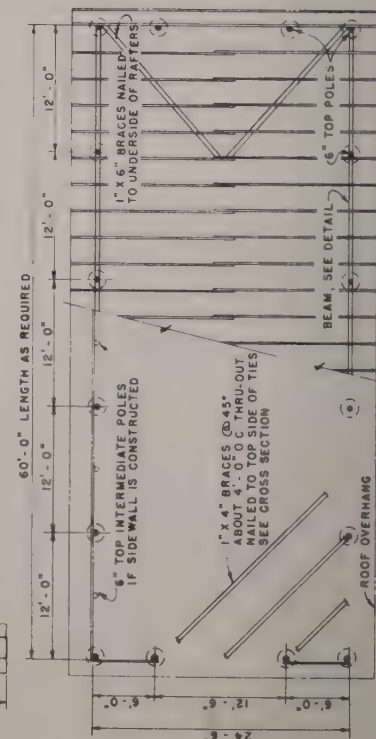
SCOOP DOOR

TOTAL CAPACITY OF BINS 1800 BU.
EXTRA HALL STORAGE 780 BU.

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UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

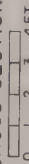
GRANARY

USDA '38	EX. 5528	SHEET 1 OF 1
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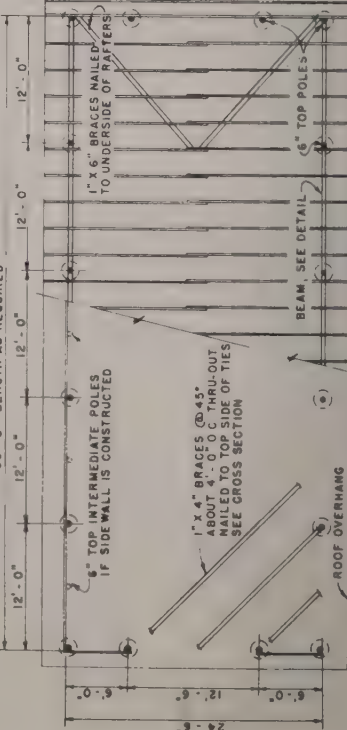


0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100
---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

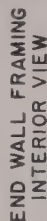
CROSS SECTION



60'-0" LENGTH AS REQUIRED

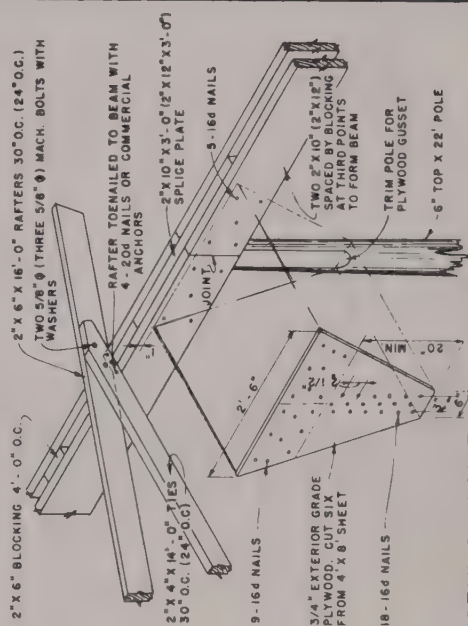


NOTE. ALL POLES AND SPLASH BOARDS TO BE PRESSURE TREATED WITH PRESERVATIVE. THIS BUILDING MAY BE BUILT IN ANY LENGTH DESIRED IN UNITS OF 12' 0". IT IS DESIGNED FOR AREAS OF THE UNITED STATES WHERE THE SNOW LOAD IS 20 LB. (OR 30 LB.) PER SQUARE FOOT OR WIND DOES NOT EXCEED 88 MILES PER HOUR. FRAMING SIZE AND NAILS FOR 20 LB. LOAD SHOWN IN PARENTHESES (...)



2" X 6" BLOCKING 4' - 0" O.C.

2" X 6" X 16'-0" RAFTERS 30° O.C. (24° O.C.)
TWO 5/8" Ø (THREE 5/8" Ø) MACH. BOLTS WITH



DETAIL OF GUSSET
CONNECTION AT POLE

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

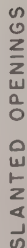
COOPERATIVE EXTENSION WORK IN
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UNIVERSITY OF MARYLAND

MAY SHED

24' WIDE - POLE CONSTRUCTION

USDA '57

5847



VIEW OF SELF-FEEDING BUNKER SILO

GENERAL NOTES

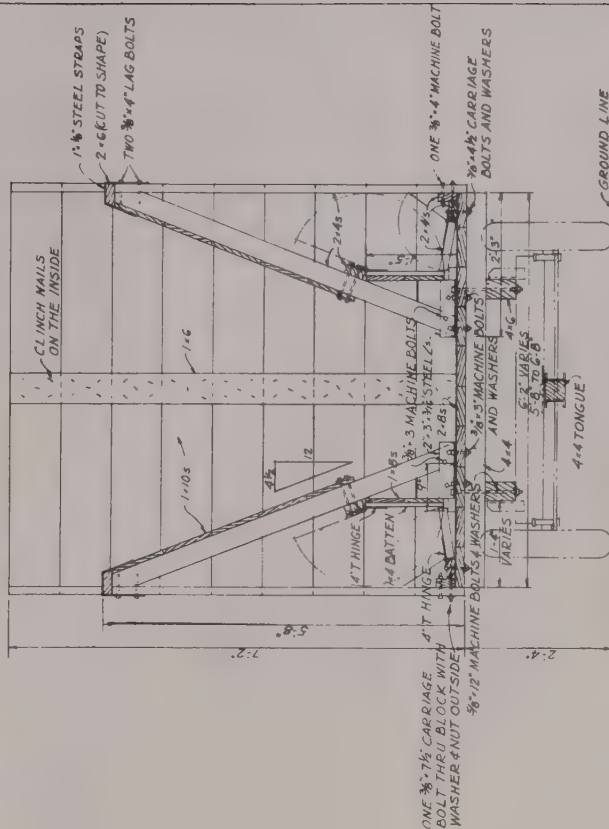
- A. THE FENCES SHOWN ON THIS PLAN MAY BE ADAPTED FOR THE USE OF SILOS OF ANY WIDTH AND MAY BE MOUNTED ON SKIDS, SUSPENDED FROM A BEAM, OR SUSPENDED AND SUPPORTED BY WHEELS RINGING ON 4" x 4" FASTENED TO WALLS OF SILO AS SHOWN ON SH 2. WHEN MOUNTED ON SKIDS, THEY MAY BE BUILT IN ONE OR TWO SECTIONS, BUT A SINGLE SECTION SHOULD NOT EXCEED 16 FEET IN LENGTH. THE PLAN FORMITY SHOWN ON THIS SH PREVENTS THE PLACING OF SILOS CLOSELY TOGETHER, PREVENTS THEM FROM PUSHING THE FENCE.
- B. THE SHAPE OF THE FENCE SHOULD CONFORM TO THE SHAPE OF THE SILO, WITH CLEARANCE OF ABOUT 3" FROM WALL, 1" FROM THE FLOOR AND 6" BETWEEN SECTIONS.
- C. ON SUSPENDED FENCES STOPS SHOULD BE PROVIDED TO PREVENT THE CATTLE FROM PUSHING THE FENCE.
- D. THE 1" x 12" MANEKER BOARD SET AT AN ANGLE OF ABOUT 45° ON THE SILOAGE SIDE REDUCES THE WASTE OF FEED AND SHOULD BE USED ON ALL TYPES OF FENCES.

- E. THE WALLS OF SELF-FEEDING SILOS SHOULD NOT BE OVER 8'-0" HIGH
- F. IF THE SILO HAS SEEPAGE GUTTERS ALONG THE WALLS, THE SKIDS SHOULD BE SET IN FROM THE END OF THE FENCE TO CLEAR THEM AS SHOWN. BOTTOM OF FENCE SHOULD CONFORM TO THE SHAPE OF THE SILO FLOOR
- G. FOR GREATER DURABILITY, ALL PARTS SHOULD BE TREATED WITH A WOOD PRESERVATIVE WHICH IS NOT TOXIC TO CATTLE
- H. ALL FENCES ARE 5'-0" HIGH. ADJUST HEIGHT TO BOTTOM OF OPENINGS TO SUIT SIZE OF CATTLE TO BE FED
- I. USE WASHERS UNDER ALL MACHINE BOLTS. USE LAG SCREWS BEARING ON WOOD

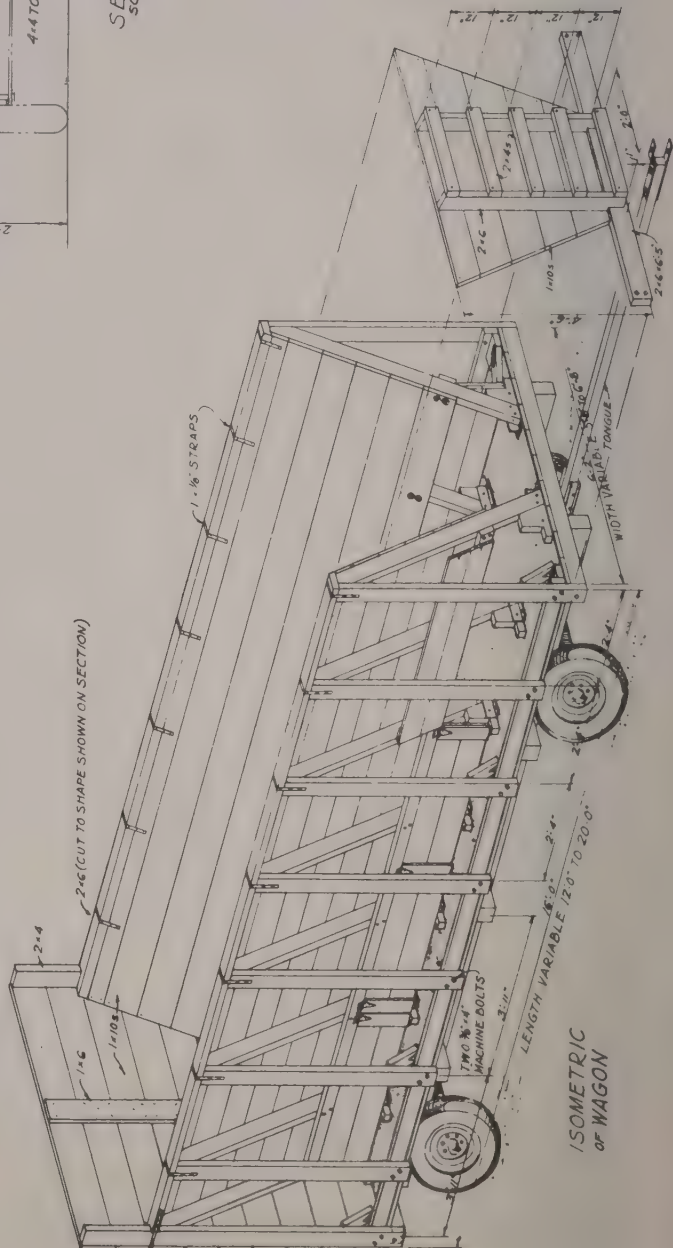
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UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

SELF-FEEDING FENCES
FOR BUNKER OR TRENCH SILO

USDA	'59	EX. 5872
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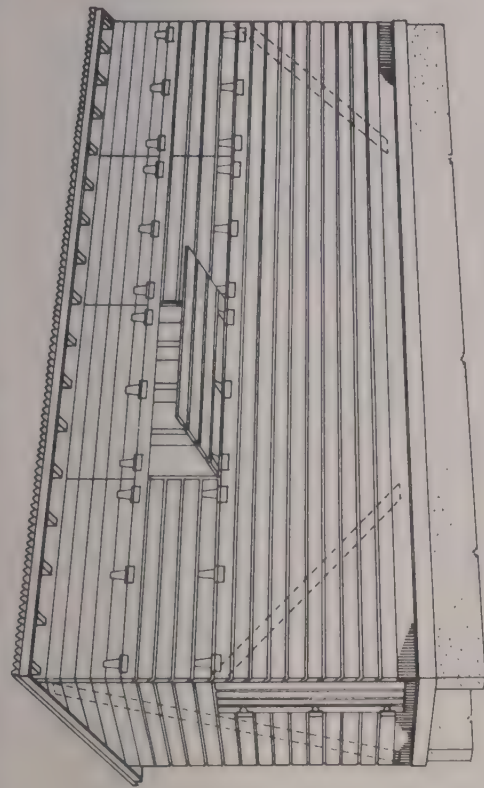


ISOMETRIC OF GATE STOP AND LOCK

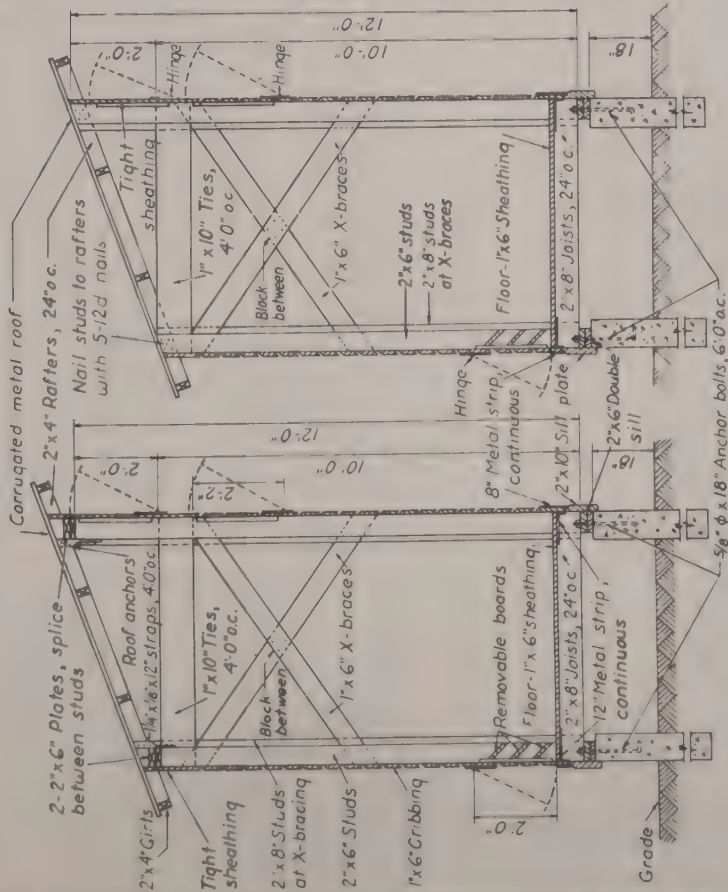


ISOMETRIC OF WAGON

SECTION
SCALE: 0 1 2 FT



PERSPECTIVE



TYPICAL SECTION

ALTERNATE FRAMING DETAIL

FRAMING DETAIL

**THIS CONSTRUCTION REDUCES
HEIGHT OF CRIB 6"**

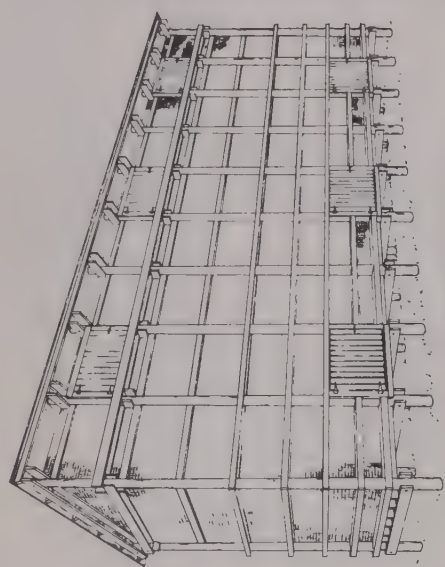
NOTE: CAPACITY OF CRIB
22 BUSHEL PER
FT OF LENGTH

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

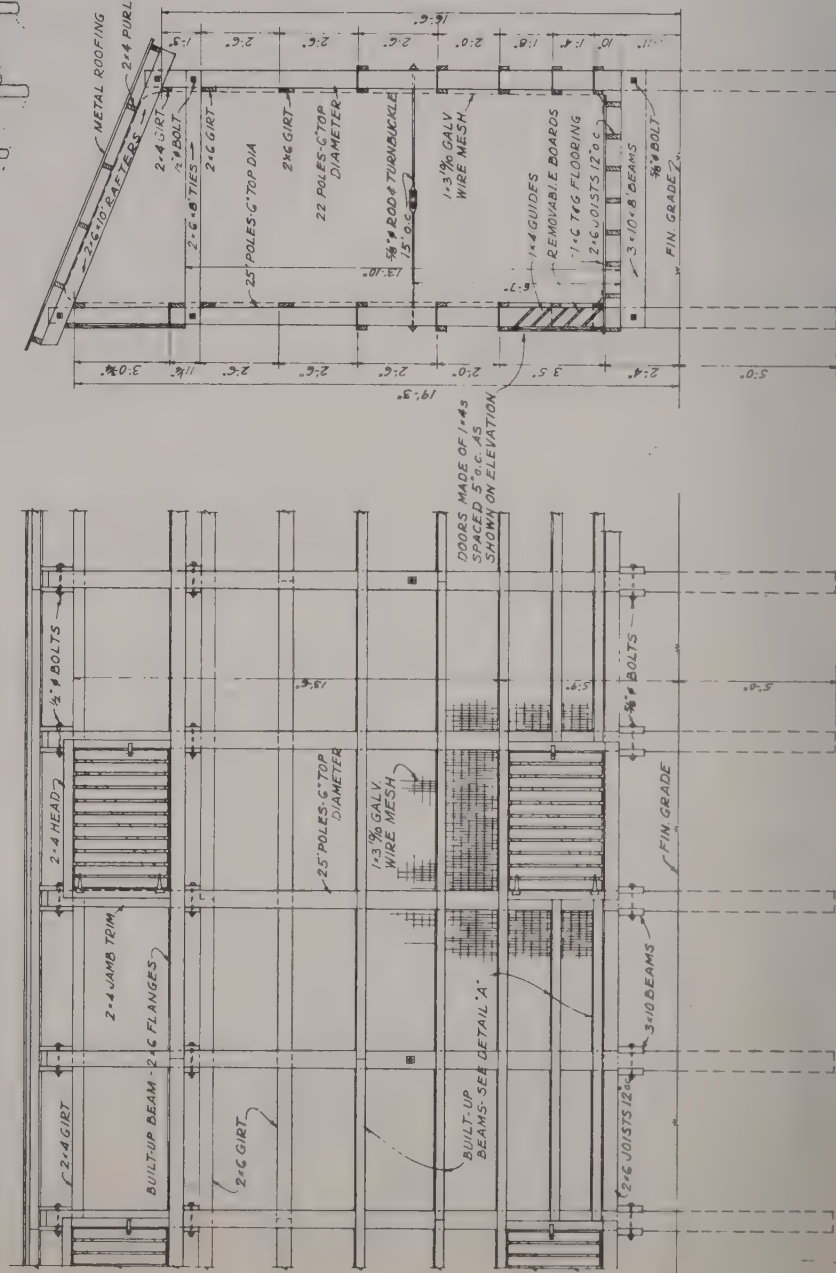
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

CORN CRIB

M.W. - 48	EX. 5679	SHEET 1 OF 1
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PERSPECTIVE



PART ELEVATION

SECTION A-A

NOTE LENGTH OF CEILING MAY BE VARIED IN UNITS OF 15 FEET.

DIMENSIONS OF MEMBERS SHOWN OTHER THAN POLES ARE BASED ON THE USE OF DRESSED LUMBER.

ALL POLES IN CONTACT WITH THE GROUND TO BE TREATED WITH A NON-TOXIC PRESERVATIVE.

ALL BOLTS SHOWN ARE GALVANIZED MACHINE BOLTS WITH WASHERS.

METAL ROOF ON STEEL PURLINS 24" O.C. TO CONFORM WITH MANUFACTURER'S DIRECTIONS.

EQUIP BUILDING WITH AN ADEQUATE LIGHTNING PROTECTION SYSTEM.

COOPERATIVE EXTENSION WORK IN
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UNIVERSITY OF MARYLAND

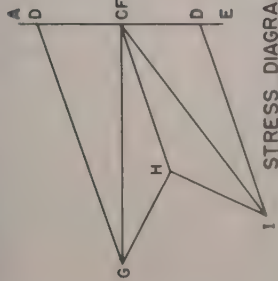
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING
AND

POLE CORN CRIB

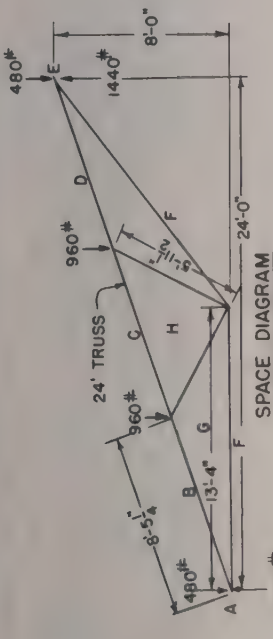
USDA '60	EX. 5878	SHEET 1 OF 1
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STRESS TABLE

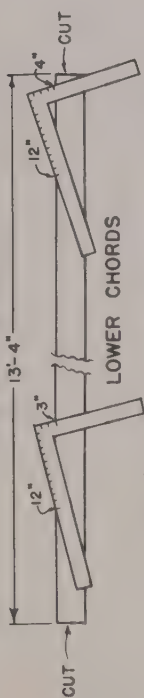
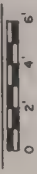
MEMBER	STRESS
BG	-3020
CH	-1830
DI	-2430
IF	+2880
GF	+2880
GH	-1280
HI	-1280



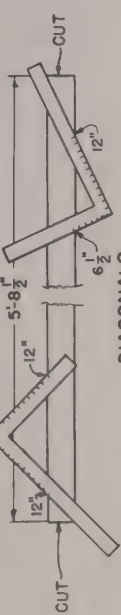
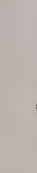
STRESS DIAGRAM



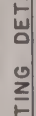
SPACE DIAGRAM



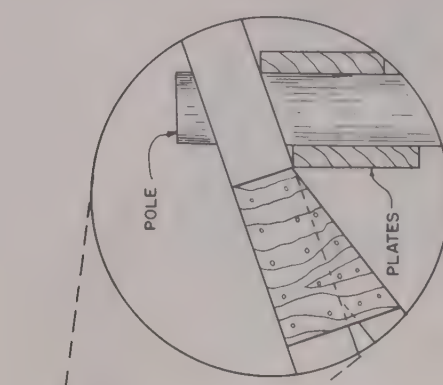
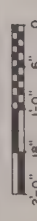
LOWER CHORDS



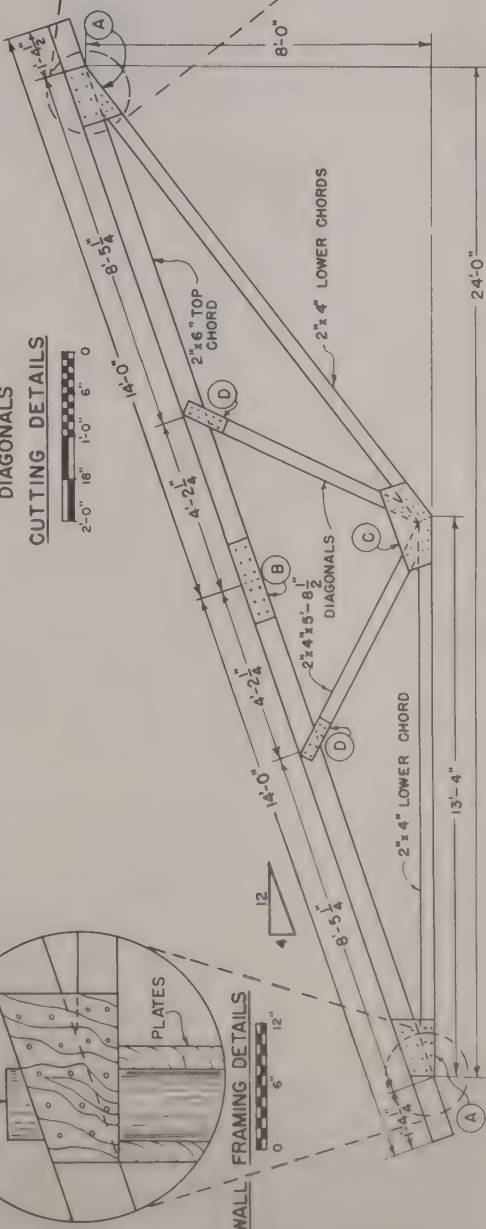
DIAGONALS



CUTTING DETAILS



WALL FRAMING DETAILS



TRUSS ELEVATION



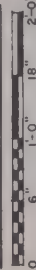
GENERAL NOTES

1. USE 3/8" EXTERIOR PLYWOOD FOR GUSSET PLATES ON BOTH SIDES OF ALL JOINTS.
2. ALL GUSSET PLATES ARE GLUED, AND NAILED IN PLACE.
3. USE CASEIN OR RESORCINOL RESIN GLUE, AND 6d BOX NAILS.
4. MIX GLUE ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND APPLY TO BOTH SURFACES TO BE JOINT.
5. ALL TRUSS MEMBERS ARE IN THE SAME PLANE AND ALL JOINTS ARE BUTT JOINTS.
6. TRUSS MEMBERS ARE TO BE ASSEMBLED IN A JIG IN A HORIZONTAL POSITION.
7. TRUSS MEMBERS ARE TO BE MOVED CAREFULLY FROM THE JIG IMMEDIATELY AFTER GUSSET PLATES HAVE BEEN SUPPLIED.
8. LEAVE TRUSSES STACKED IN A HORIZONTAL POSITION FOR AT LEAST 24 HRS. AFTER ASSEMBLY.
9. TRUSSES MAY BE PLACED ON FRAME WALLS, MASONRY WALLS, OR POLE CONSTRUCTION.
10. PROPER ANCHORAGE OF TRUSSES TO WALLS IS IMPORTANT.

MATERIALS LIST

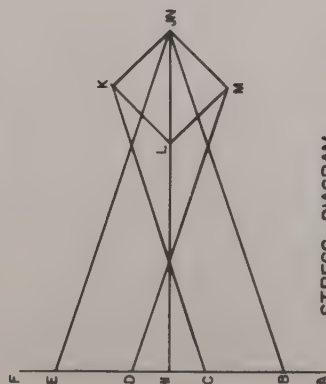
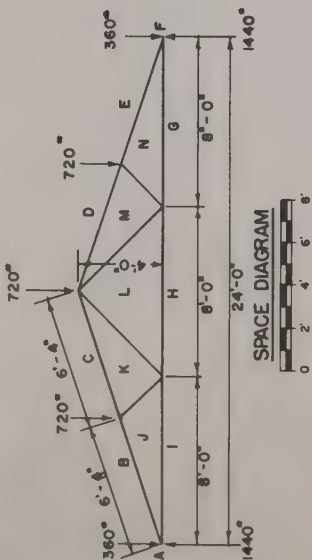
MEMBER	NO.	SIZE	BD. FT.
TOP CHORD	2	2" x 6" x 14'-0"	28
LOWER CHORD	2	2" x 6" x 14'-0"	20
DIAGONALS (2)	1	2" x 4" x 12'-0"	8
6d BOX NAILS	1	LB.	56
PLYWOOD GUSSETS	1	5/8" x 32" x 48"	1/3 SHT.
CASEIN OR RESORCINOL	1	LB.	
RESIN GLUE	1	LB.	

WALL FRAMING DETAILS



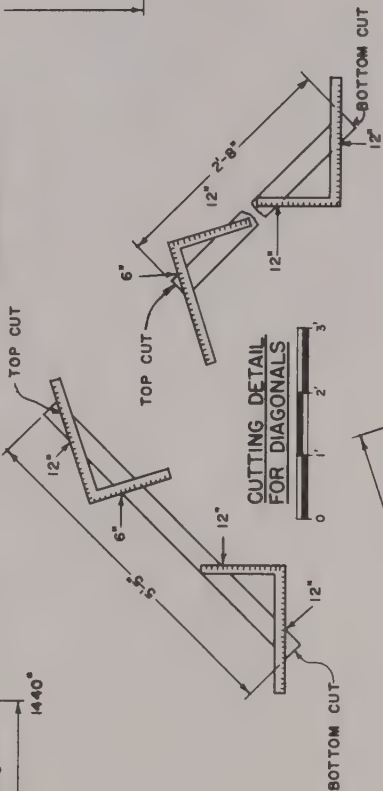
Rev. 10-23-63

MICHIGAN STATE UNIVERSITY COOPERATIVE EXTENSION SERVICE AGRICULTURAL ENGR. DEPARTMENT, E. LANSING
24' GLUE AND NAIL SINGLE SLOPE TRUSS
PLANNED MDS DRAWN FJW TRACED FJW CHECKED MLE
APR 1958 DATE 10-10-57 SHEET 1 OF 1
NO. 703 - C1 - 85

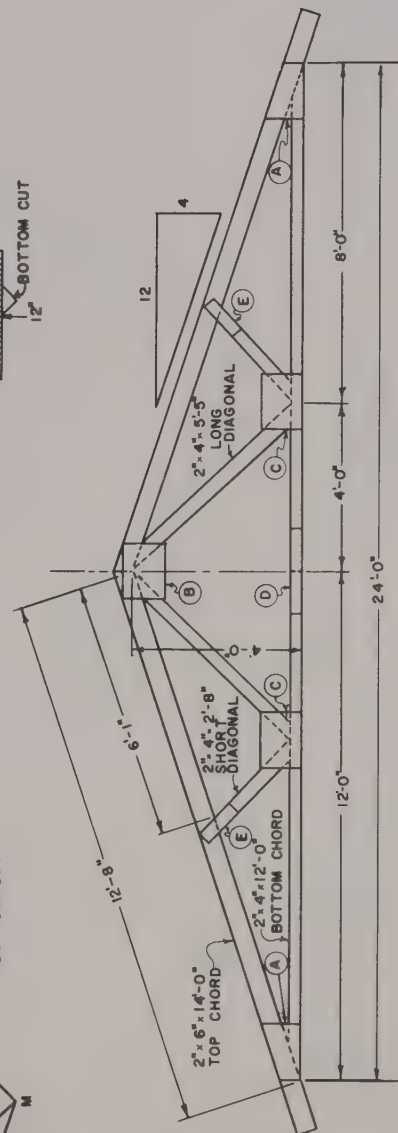


TRUSS SPACING 4'-0" O.C.
DEAD LOAD + LIVE LOAD = 30 P.S.F.

MATERIAL SPECIFICATIONS
ALLOWABLE STRESS IN BENDING - 1500 p.s.i.
ALLOWABLE STRESS IN COMPRESSION - 1200 p.s.i.
EXAMPLES: CONSTRUCTION DOUGLAS FIR J&P,
CONST. LARCH J&P, SEL. STR. MEMLOCK J&P,
B NO. 1 YELLOW PINE (SOUTHERN)
USE EXT. C-C GRADE PLYWOOD, TYPE II (MOLD RESIST.) CASEIN
OR RESORCINOL GLUE.



CUTTING DIAGRAM FOR
GUSSET PLATES



ELEVATION

GENERAL SPECIFICATIONS

1. USE 5/8" EXTERIOR PLYWOOD FOR GUSSET PLATES ON BOTH SIDES OF ALL JOINTS.
2. ALL GUSSET PLATES ARE GLUED AND NAILED IN PLACE.
3. ALL GUSSET PLATES ARE TO BE MANUFACTURED TO SPECIFICATIONS AND APPLY TO BOTH SURFACES TO BE JOINED.
4. ALL TRUSS MEMBERS ARE IN THE SAME PLANE AND ALL JOINTS ARE BUTT JOINTS.
5. TRUSS MEMBERS ARE CUT TO LENGTH AND THE TRUSS IS ASSEMBLED IN A JIG IN A HORIZONTAL POSITION.
6. THE ASSEMBLED TRUSS MAY BE MOVED CAREFULLY FROM THE JIG IMMEDIATELY AFTER GUSSET PLATES HAVE BEEN APPLIED.
7. TRUSS MEMBERS ARE TO BE STAKED IN A HORIZONTAL POSITION FOR AT LEAST 24 HOURS BEFORE ASSEMBLY.
8. TRUSSES MAY BE PLACED ON FRAME WALLS, MASONRY WALLS OR POLE CONSTRUCTION.
9. PROPER ANCHORAGE OF TRUSSES TO WALLS IS IMPORTANT.

STRESS TABLE	STRESS TABLE
MEMBER	STRESS TABLE
B	3090
C	2830
D	3090
E	3090
F	3220
G	2130
H	3220
I	770
J	770
K	770
L	770
M	770
N	770

LIST OF MATERIALS	LIST OF MATERIALS
MEMBER	MEMBER
TOP CHORD	2" x 6" x 14'-0"
LOWER CHORD	2" x 4" x 12'-0"
LONG DIAGONAL	2" x 4" x 5'-5"
SHORT DIAGONAL	2" x 4" x 2'-8"
BOX NAILS	1 LB.
WOOD GUSSETS	1 LB.
PLYWOOD	1 LB.
RESORCINOL	1 LB.

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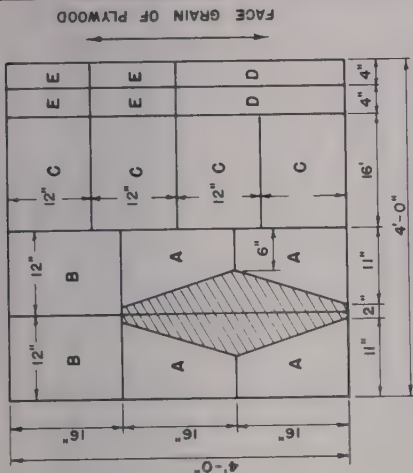
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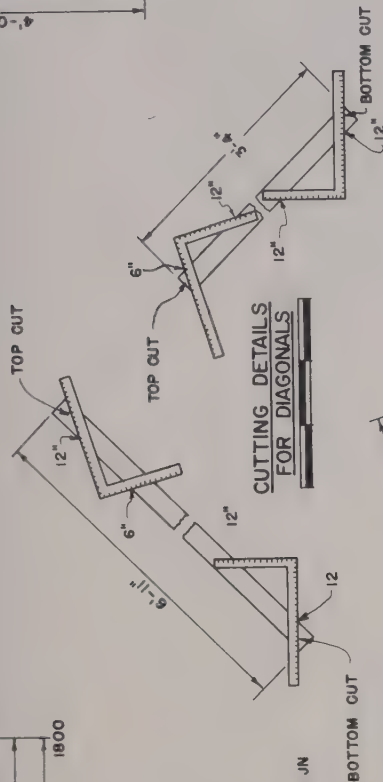
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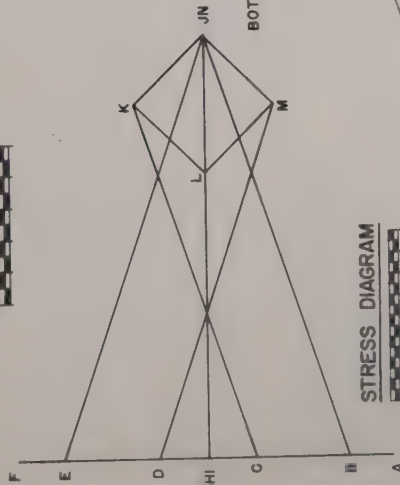
TRUSS SPACING 4'-0" O.C.
DEAD LOAD + LIVE LOAD = 30 P.S.F.
MAXIMUM ALLOWABLE FIBER STRESS = 2000 P.S.I.
CONSTRUCTION GRADE DOUGLAS FIR OR EQUIVALENT.



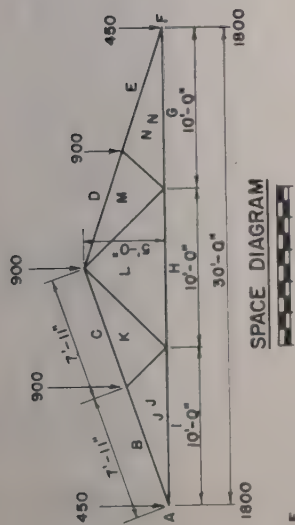
CUTTING DIAGRAM FOR GUSSET PLATES



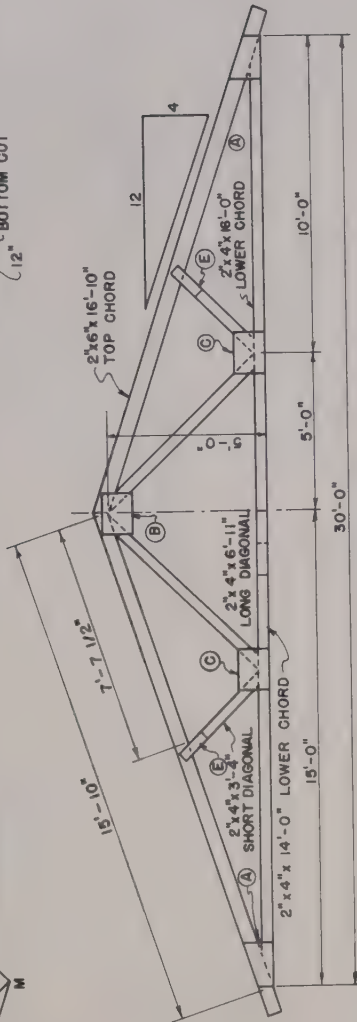
STRESS DIAGRAM



SPACE DIAGRAM



ELEVATION



- GENERAL SPECIFICATIONS
1. USE 5/8" EXTERIOR PLYWOOD FOR GUSSET PLATES ON BOTH SIDES OF ALL JOINTS.
 2. ALL GUSSET PLATES ARE GLUED AND NAILED IN PLACE.
 3. ALL GUSSET PLATES ARE GLUED AND NAILED IN PLACE.
 4. ALL GUSSET PLATES ARE GLUED AND NAILED IN PLACE.
 5. ALL TRUSS MEMBERS ARE IN THE SAME PLANE AND ALL JOINTS ARE BUTT JOINTS.
 6. TRUSS MEMBERS ARE CUT TO LENGTH AND THE TRUSS IS ASSEMBLED IN A HORIZONTAL POSITION.
 7. THE ASSEMBLED TRUSS MAY BE MOVED CAREFULLY FROM THE JIG IMMEDIATELY AFTER GUSSET PLATES HAVE BEEN APPLIED.
 8. LEAVE TRUSSES STACKED IN A HORIZONTAL POSITION FOR AT LEAST 24 HOURS AFTER ASSEMBLY.
 9. TRUSSES MAY BE PLACED ON FRAME WALLS, MASONRY WALLS, OR POLE CONSTRUCTION.
 10. PROPER ANCHORAGE OF TRUSSES TO WALL IS IMPORTANT.

STRESS TABLE		WIND LOAD
MEMBER	STRESS	
BJ	-4250	
CK	-3550	
DM	-3550	
EN	-4250	
NG	+4040	
LH	+2730	
JK	-945	
KL	+945	
LM	+945	
MN	-945	

LIST OF MATERIALS		BD. FT.
MEMBER	NO. PCS.	
TOP CHORD	2	36
LOWER CHORD	1	10
SHORT DIAGONAL	1	11
LONG DIAGONAL	1	6
6d BOX NAILS	1 LB.	73
PLASTER OR RESORCINOL		
RESIN GLUE	1 LB.	16 SQ. FT.

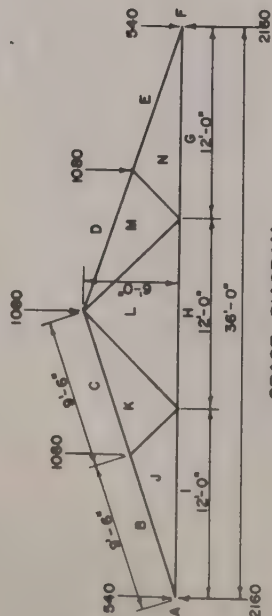
MICHIGAN STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE
AGRICULTURAL ENGINEERING DEPT. - EAST LANSING

30' GLUE AND NAIL TRUSS
(1/6 PITCH)

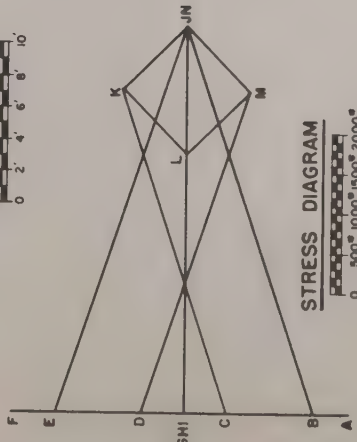
PLANNED MLE
DRAWN J M C
TRACED W O C
CHECKED MLE

APPR J S B
DATE 6-11-64
SHEET 1 OF 1

NO. 703 - CI - 62

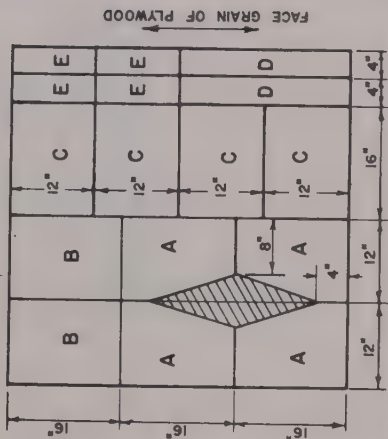


SPACE DIAGRAM

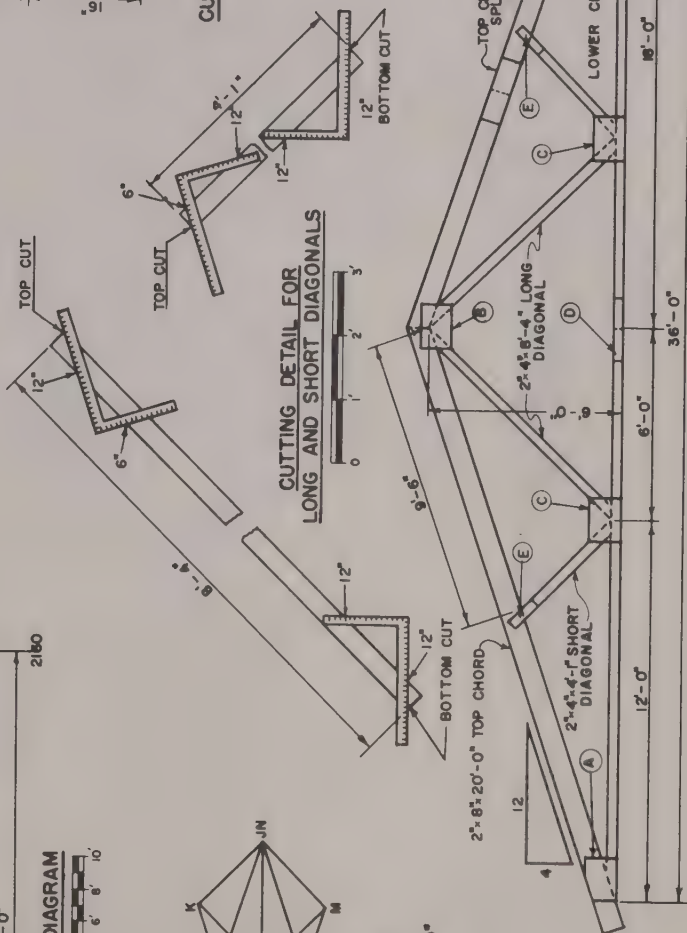


STRESS DIAGRAM

TRUSS SPACING 4'-0" O.C.
DEAD LOAD + LIVE LOAD = 30 P.S.F.
MAXIMUM ALLOWABLE FIBER STRESS = 2000 P.S.I.
CONSTRUCTION GRADE DOUGLAS FIR OR EQUIVALENT.



CUTTING DIAGRAM FOR GUSSET PLATES



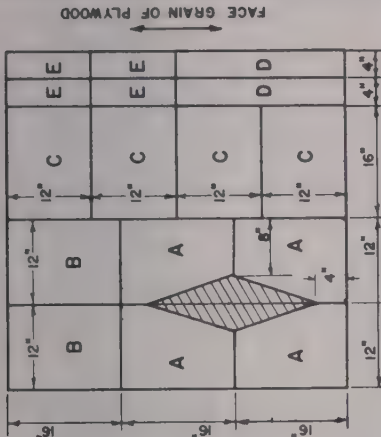
TRUSS ELEVATION

- GENERAL SPECIFICATIONS
1. USE 5/8" EXTERIOR PLYWOOD FOR GUSSET PLATES ON BOTH SIDES OF
 2. ALL JOINTS.
 3. ALL GUSSET PLATES ARE GLUED AND NAILED IN PLACE.
 4. USE CASEIN OR RESORCINOL RESIN GLUE AND 6d BOX NAILS.
 5. BOTH SURFACES JOINING AT JOINTS TO BE MANUFACTURERS SPECIFICATIONS AND APPLY TO
 6. ALL TRUSS MEMBERS ARE IN THE SAME PLANE AND ALL JOINTS ARE
 7. BUTT JOINTS.
 8. TRUSS MEMBERS ARE CUT TO LENGTH AND THE TRUSS IS ASSEMBLED
 9. IN A JIG IN A HORIZONTAL POSITION.
 10. THE ASSEMBLED TRUSS MAY BE MOVED CAREFULLY FROM THE JIG
 11. IMMEDIATELY AFTER GUSSET PLATES HAVE BEEN APPLIED.
 12. LEAVE TRUSSES STACKED IN HORIZONTAL POSITION FOR AT LEAST
 13. 24 HOURS AFTER ASSEMBLY.
 14. TRUSSES MAY BE PLACED ON FRAME OR MASONRY WALLS OR ON POLE
 15. CONSTRUCTION.
 16. PROPER ANCHORAGE OF TRUSSES TO WALLS IS IMPORTANT.

MEM.	SNOW LOAD	WIND LOAD
B	-5120	+1050
C	-4250	+1013
D	-5150	+1263
E	-4850	+1463
F	-3225	-0663
G	-4850	-0660
H	-1150	-0088
I	-1150	-0088
J	-1150	-0088
K	-1150	-0088
L	-1150	-0088
M	-1150	-0088
N	-1150	-0088
O	-1150	-0088
P	-1150	-0088
Q	-1150	-0088
R	-1150	-0088
S	-1150	-0088
T	-1150	-0088
U	-1150	-0088
V	-1150	-0088
W	-1150	-0088
X	-1150	-0088
Y	-1150	-0088
Z	-1150	-0088

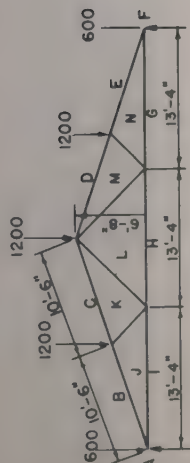
MEMBER	NO. PCS.	SIZE	BD. FT.
TOP CHORD	2	2" x 8" x 20'-0"	54
LOWER CHORD	2	2" x 4" x 18'-0"	24
LONG DIAGONAL	2	2" x 4" x 8'-0"	12
SHORT DIAGONAL	2	2" x 4" x 4'-0"	7
6d BOX NAILS	1 LB.	5/8" x 4" x 4'	57
PLYWOOD GUSSETS	1	5/8" x 4" x 4'	16 SQ. FT.
CASEIN OR RESORCINOL	1 LB.		
RESIN GLUE	1 LB.		

REVISIONS	6-10-64	MICHIGAN STATE UNIVERSITY
REVISIONS	9-23-68	COOPERATIVE EXTENSION SERVICE
		AGRICULTURAL ENGINEERING DEPARTMENT, E. LANSING
		36' GLUE AND NAIL TRUSS
		(1/6 PITCH)
PLANNED FILE	DATE 1-3-68	SHEET 1 OF 1
DRAWN	DATE	
CHECKED	DATE	

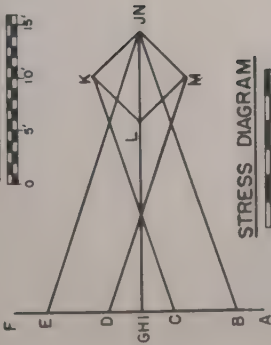


CUTTING DIAGRAM FOR GUSSET PLATES

TRUSS SPACING 4' O. C.
DEAD LOAD + LIVE LOAD = 30 P.S.F.
MAXIMUM ALLOWABLE FIBER STRESS = 2000 P.S.I.
CONSTRUCTION GRADE DOUGLAS FIR OR EQUIVALENT

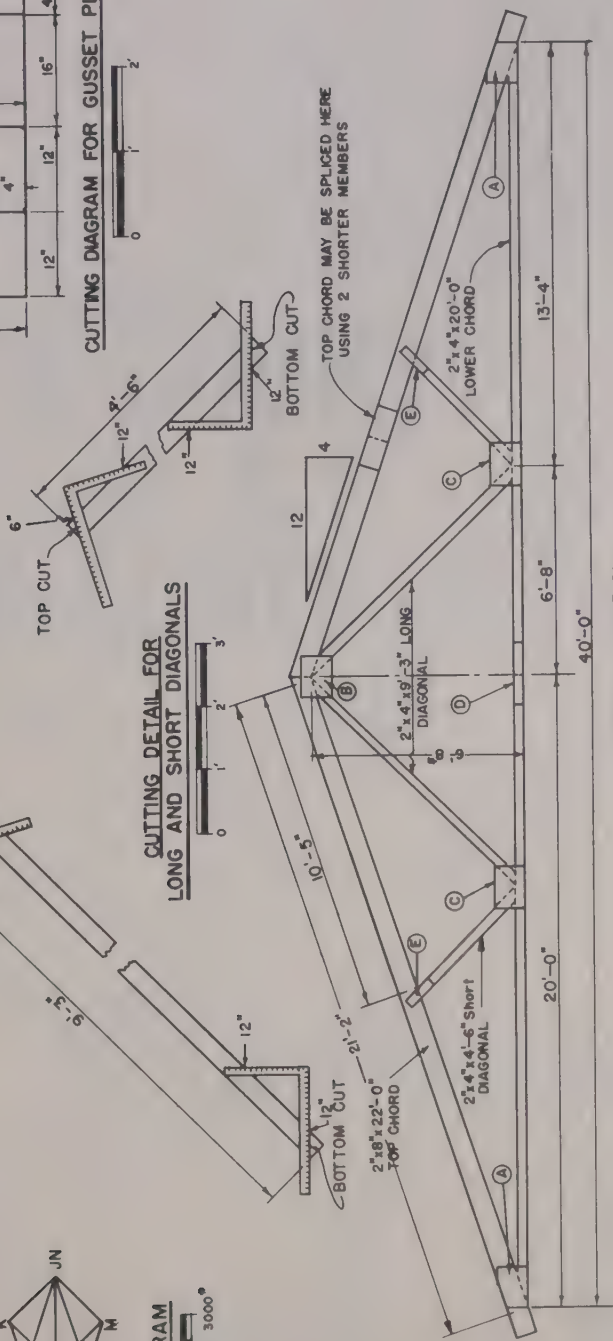


SPACE DIAGRAM



STRESS DIAGRAM

CUTTING DETAIL FOR LONG AND SHORT DIAGONALS



TRUSS ELEVATION

GENERAL SPECIFICATION

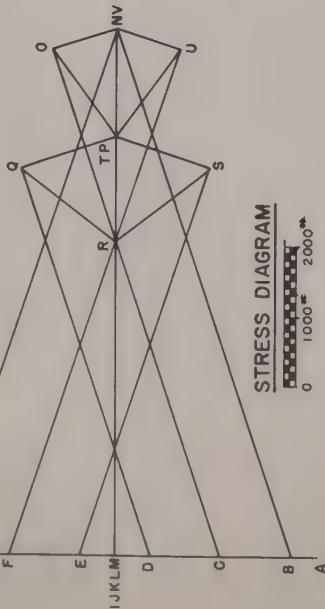
1. USE 5/8" EXTERIOR PLYWOOD FOR GUSSET PLATES ON BOTH SIDES OF ALL JOINTS.
2. ALL GUSSET PLATES ARE GLUED AND NAILED IN PLACE.
3. USE CASEIN OR RESORCINOL RESIN GLUE AND 16D COMMON NAILS.
4. MIX GLUE ACCORDING TO MANUFACTURERS' SPECIFICATIONS AND APPLY TO BOTH SURFACES TO BE JOINED.
5. ALL TRUSS MEMBERS ARE IN THE SAME PLANE AND ALL JOINTS ARE BUTT JOINTS.
6. TRUSS MEMBERS ARE CUT TO LENGTH AND THE TRUSS IS ASSEMBLED IN A HORIZONTAL POSITION.
7. THE ASSEMBLED TRUSS MAY BE MOVED CAREFULLY FROM THE JIG IMMEDIATELY AFTER THE GUSSET PLATES HAVE BEEN APPLIED.
8. LEAVE TRUSSES STACKED IN A HORIZONTAL POSITION FOR AT LEAST 24 HOURS AFTER ASSEMBLY.
9. TRUSSES MAY BE PLACED ON FRAME WALLS, MASONRY WALLS, OR POLE FOUNDATIONS.
10. PROPER ANCHORAGE OF TRUSSES TO WALLS IS IMPORTANT.

STRESS TABLE	
MEMBER	WIND LOAD
BJ	-5630
CK	-1620
DM	+1400
EN	+1400
FG	+1620
GH	-1570
IJ	-900
JK	+1970
KL	+1470
LM	-470
MN	+470

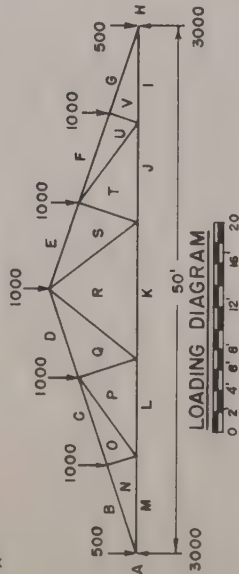
6-10-64 CHS
1-3-61 CFS
REVISED 9-23-66

MICHIGAN STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE
AGRICULTURAL ENGINEERING DEPARTMENT, E. LANSING
40' GLUE AND NAIL TRUSS
(1/6 PITCH)
PLANNED MLE
DRAWN MDS
CHECKED MLE
DATE 3-12-66 SHEET 1 OF 1
NO. 703-CI-70

TRUSS SPACING 4'-0" O. C.
DEAD LOAD + LIVE LOAD = 30 P.S.F.
MAXIMUM ALLOWABLE FIBER STRESS = 2000 P.S.I.
CONSTRUCTION GRADE DOUGLAS FIR OR EQUIVALENT.

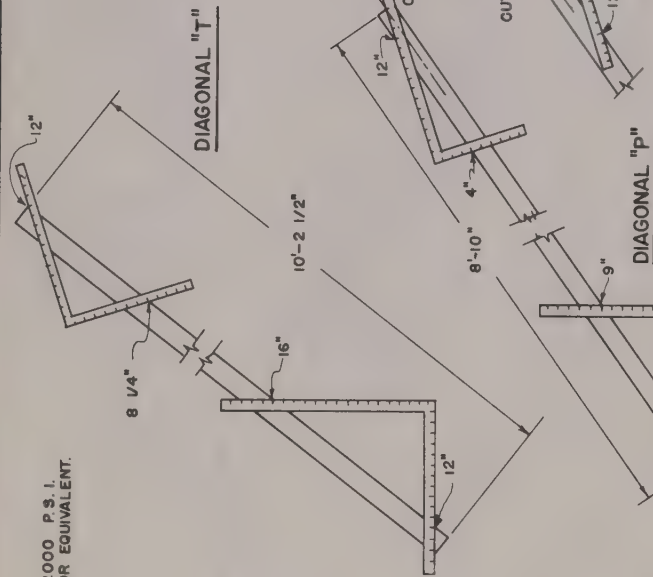


STRESS DIAGRAM



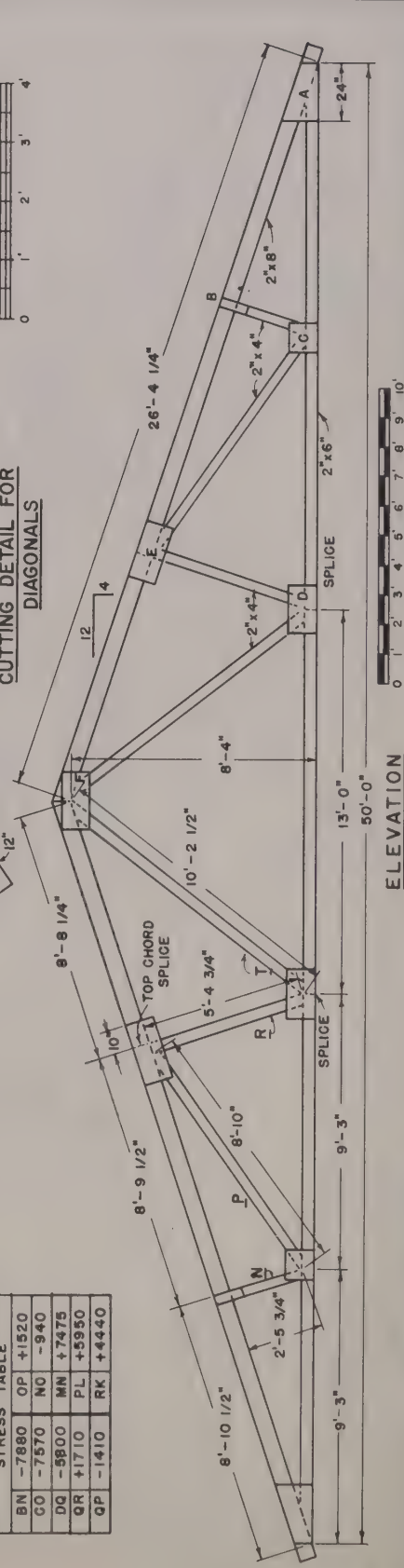
LOADING DIAGRAM

STRESS TABLE	
BN -7880	OP +1520
CO -7570	NO -940
DQ -5900	NN +7475
QR +1710	PL +5950
QI -1410	RK +4440



CUTTING DIAGRAM FOR GUSSET PLATES

CUTTING DETAIL FOR DIAGONALS



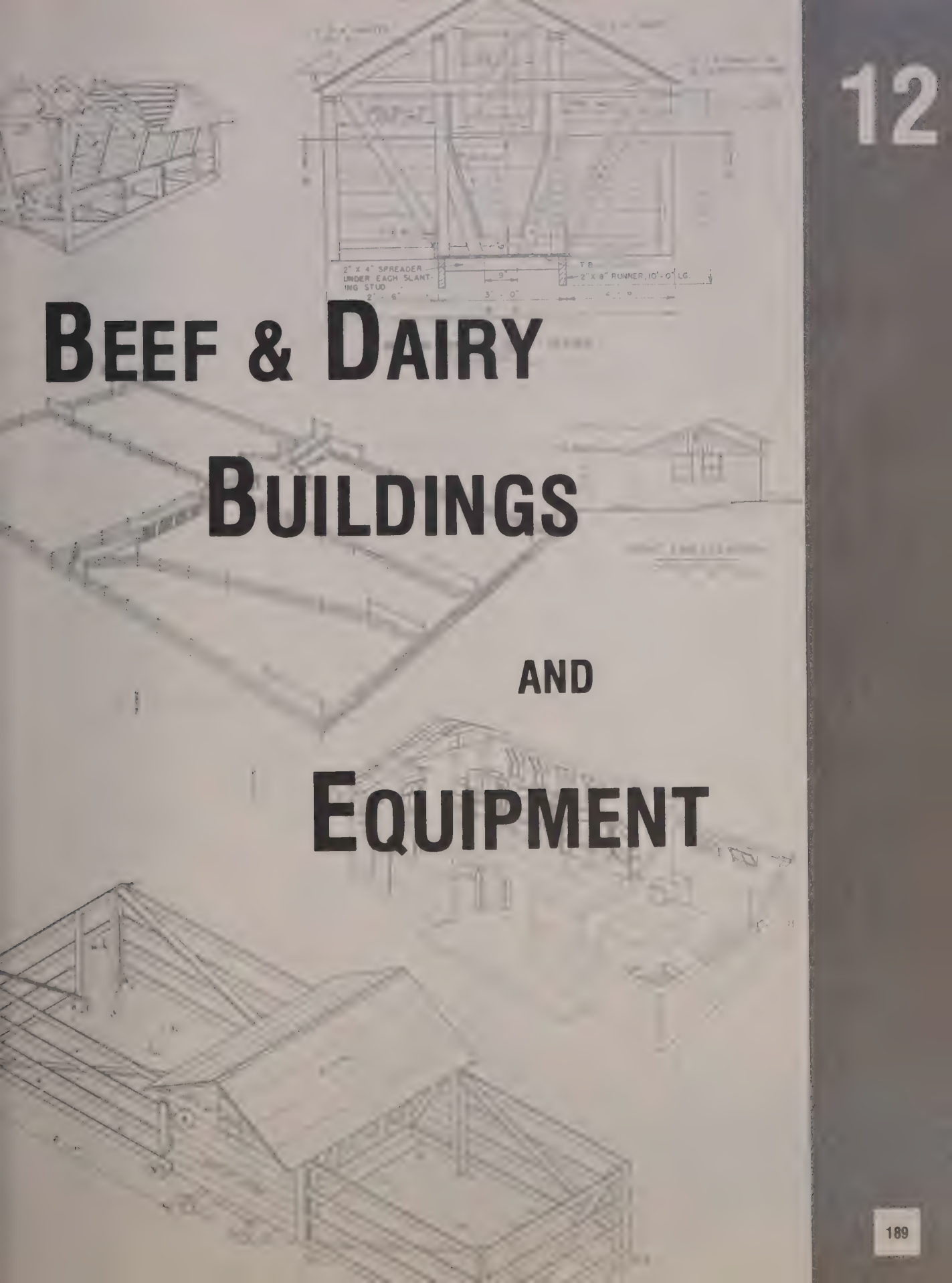
ELEVATION

GENERAL SPECIFICATIONS

1. USE 5/8" EXTERIOR PLYWOOD FOR GUSSET PLATES ON BOTH SIDES OF ALL JOINTS.
2. ALL GUSSET PLATES ARE GLUED AND NAILED IN PLACE.
3. MIX GLUE ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND APPLY TO BOTH SURFACES TO BE JOINED.
4. ALL TRUSS MEMBERS ARE IN THE SAME PLANE AND ALL JOINTS ARE TO BE JOINED IN A HORIZONTAL POSITION.
5. TRUSS MEMBERS ARE CUT TO LENGTH AND THE TRUSS IS ASSEMBLED IN A HORIZONTAL POSITION.
6. THE ASSEMBLED TRUSS MAY BE MOVED CAREFULLY FROM THE JOG IMMEDIATELY AFTER GUSSET PLATES HAVE BEEN APPLIED.
7. LEAVE TRUSSES STACKED IN A HORIZONTAL POSITION FOR AT LEAST 24 HOURS AFTER ASSEMBLY.
8. TRUSSES MAY BE PLACED ON FRAME WALLS, MASONRY WALLS OR POLE CONSTRUCTION.
9. PROPER ANCHORAGE OF TRUSSES TO WALLS IS IMPORTANT.

LIST OF MATERIALS

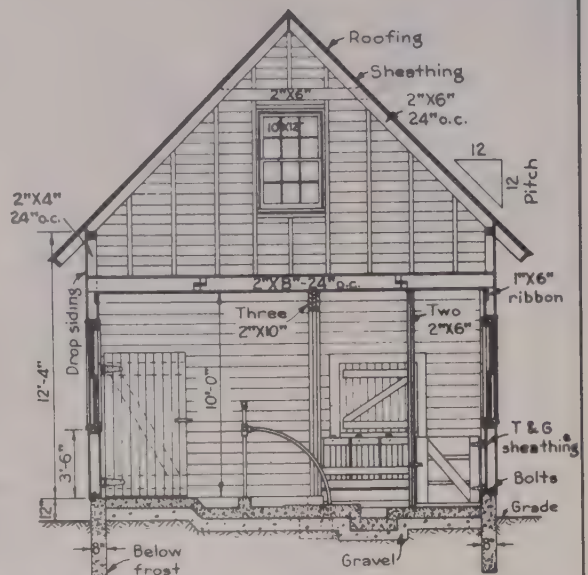
MEMBER	NO. PCS.	SIZE	BO. FT.
TOP CHORD (LONG SECTION)	2	2"x8"x18'	48
TOP CHORD (SHORT)	2	2"x8"x10'	27
BOTTOM CHORD (LONG)	2	2"x6"x20'	40
BOTTOM CHORD (SHORT)	1	2"x6"x14'	14
DIAGONALS (N, P & R)	4	2"x4"x10'	27
DIAGONALS (T)	1 1/2	2"x4"x12'	16
6d BOX NAILS	1	5/8"x6"	172
13000 RESIN GLUE	1		32 SQ. FT.
CASEIN OR RESORCINOL RESIN GLUE	1		

The background of the cover features several architectural drawings. At the top left is a perspective view of a building's interior with a slanted roof and wooden framing. To its right is a cross-section of a building showing the roof structure, rafters, and floor joists. Below these are two perspective views of rectangular buildings, one with a slanted roof and the other with a gabled roof. At the bottom is a perspective view of a large, open-sided structure, possibly a feedlot or a large storage shed, with a slanted roof and wooden walls. The title text is overlaid on these drawings.

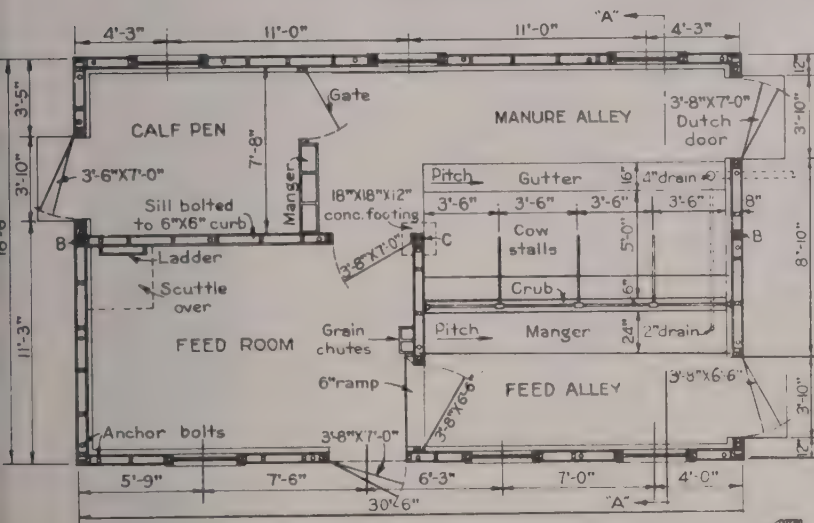
BEEF & DAIRY BUILDINGS AND EQUIPMENT



PERSPECTIVE



SECTION A-A



PLAN

BILL OF MATERIALS

CONCRETE

Foundations 1:2½:5 mix
37 bags cement 3½ cu.yds sand 7 cu.yds gravel
5" base of floor 1:2½:5 mix.
40 bags cement 4 cu.yds sand 8 cu.yds gravel
1" top coat 1:2½ mix
17 bags cement 2 cu.yds sand

LUMBER

1-4"X4"X12'-0" bracket 32-2"X6"X16'-0" rafters
6-2"X10"X16'-0" girders 24-2"X4"X10'-0" studs, etc.
4-2"X8"X16'-0" barge rafters 76-2"X4"X12'-0" " "
17-2"X8"X20'-0" joists 4-2"X4"X14'-0" " "
3-2"X6"X10'-0" posts 16-2"X4"X16'-0" " "
2-2"X6"X12'-0" posts 4-2"X4"X18'-0" " "
7-2"X6"X14'-0" collar beams 1-1"X10"X12'-0" gate
32-lin. ft. 1"X8" ridge 1-1"X12"X12'-0" manger
340-lin. ft. 1"X4" bridging, manger, etc.
160-lin. ft. 1"X6" fascia, ledger board, etc.
100-lin. ft. 1"X3" rake mould
4250-sq. ft. BM 1"X6" T&G sheathing (roof, walls, floor, ceiling, + doors)
1500-sq. ft. BM 1"X6" drop siding (outside walls)
Door frames, trim, corner boards, etc.

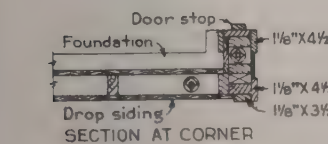
14-1½"X3½"X14'-0" 2-1"X4"X10'-0"
1-1½"X3½"X16'-0" 6-1"X4"X14'-0"
4-1½"X2½"X14'-0" 2-1"X2"X12'-0"
2-1½"X4½"X12'-0" 5-1½"X4½"X12'-0"
7-windows 1¾" check rail 12 lights 10"X12"
with frames and 1"X4" inside and outside trim

MISCELLANEOUS

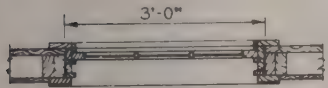
11-squares roofing as desired (nails)
1-strap iron anchor ½"X1½"X18"
2-½"X5" bolts 13-pair 6"T hinges
8-hasps 27-5/8"X12" anchor bolts
1½" pipe for cow stalls as shown
1-hook and pulley for hoisting

Nails
10-lbs. 20d common 125-lbs 8d common
50-lbs 16d " 30-lbs 6d "

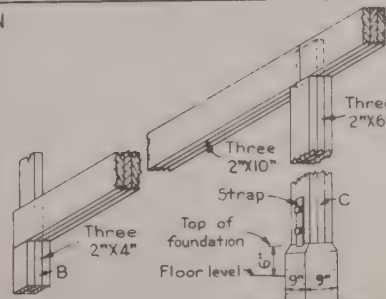
Paint
5 gals for 2 coats outside



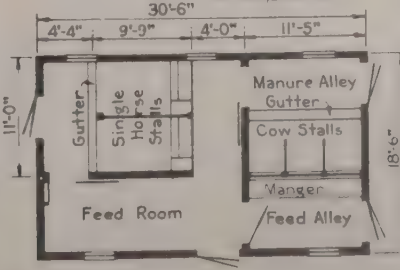
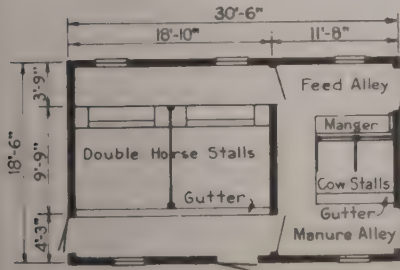
SECTION AT CORNER



SECTION OF WINDOW



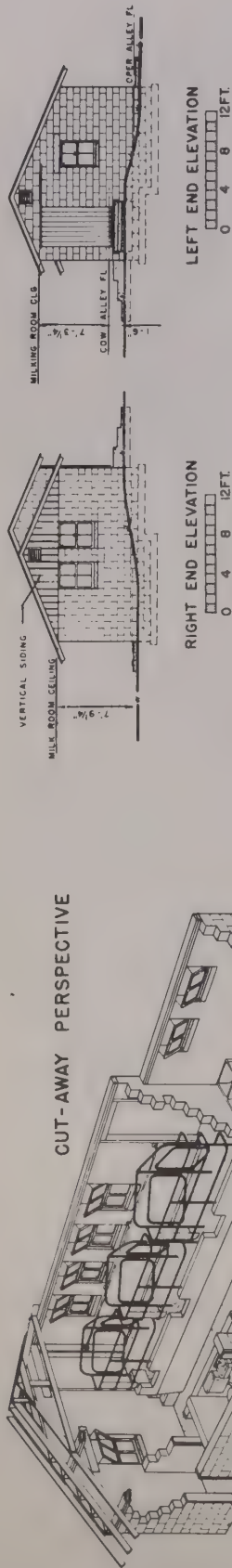
DETAILS B & C



ALTERNATE PLANS

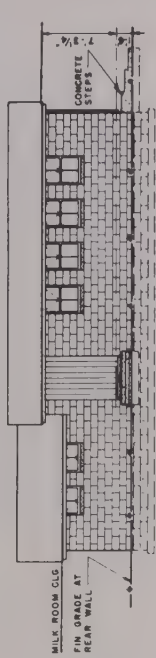
U.S. DEPARTMENT OF AGRICULTURE	
BUREAU OF AGRICULTURAL ENGINEERING	
DIVISION OF PLANS AND SERVICE	
DAIRY BARN	
Drawn by E.T. Davis	CHECKED
Traced by E.T. Davis	SHEET 1 OF 1
Approved M.C. Betts	SERIAL NO 495

CUT-AWAY PERSPECTIVE

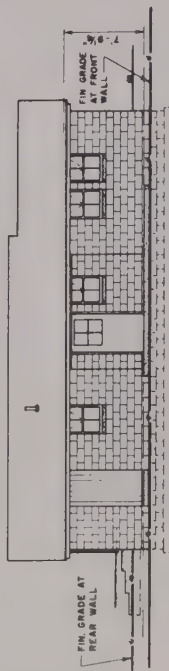


RIGHT END ELEVATION
0 4 8 12 FT.

LEFT END ELEVATION
0 4 8 12 FT.



REAR ELEVATION
0 4 8 12 FT.



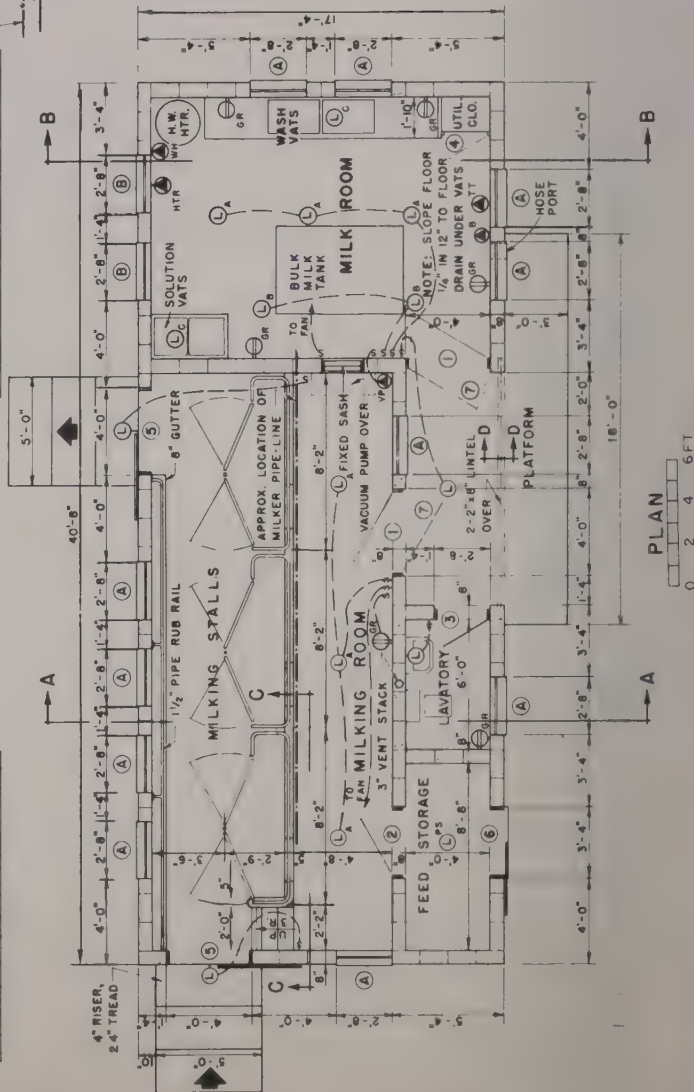
FRONT ELEVATION
0 4 8 12 FT.

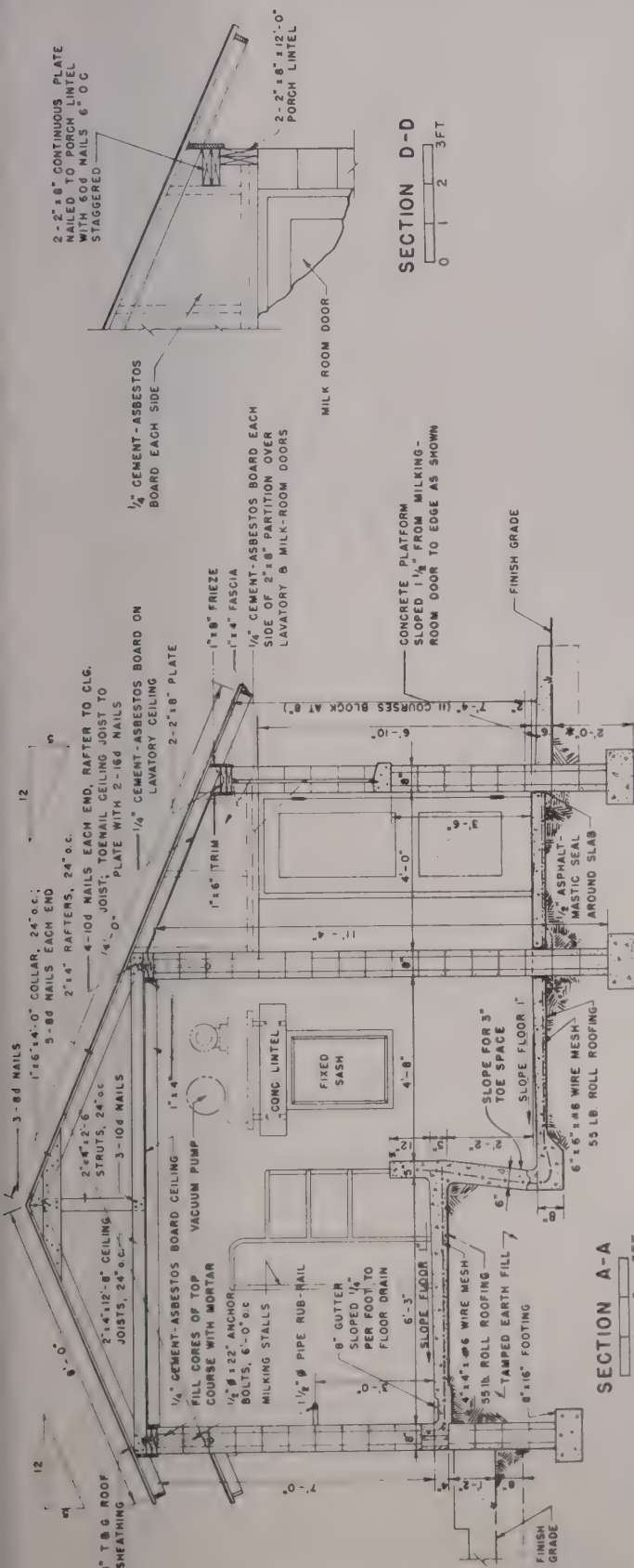
GENERAL NOTES

1. CONSULT LOCAL HEALTH AUTHORITIES BEFORE STARTING CONSTRUCTION TO BE SURE THAT PLAN CONFORMS WITH LOCAL REGULATIONS.
2. VARIABLE DIMENSIONS MARKED WITH *. CARRY FOUNDATION TO SOLID GROUND BELOW FROST.
3. PRECAST CONCRETE LINTELS OVER OPENINGS HAVING MASONRY ABOVE. LINTELS TO HAVE 8" BEARING ON EACH END. REINFORCE LINTELS WITH 2-5/8" RODS 4" APART AND 1 1/2" FROM BOTTOM.
4. FILL BLOCK CORES UNDER ENDS OF LINTELS WITH CEMENT MORTAR.
5. CONCRETE FLOORS USED BY CATTLE TO HAVE BROOMED (ROUGH) FINISH.
6. PAINT EXTERIOR SURFACE OF BLOCK WALL WITH 2 COATS OF CEMENT PAINT ABOVE FINISH GRADE, PARGE WITH 1/2" CEMENT-MORTAR BELOW FIN. GRADE.
7. DRAINS TO MEET LOCAL CONDITIONS.

DOOR SCHEDULE		
NO.	WIDTH HEIGHT THK.	REMARKS
1	3'-8" 6'-8" 1 3/4"	FLUSH WOOD, GLAZED
2	3'-0" 6'-8" 1 3/4"	FLUSH WOOD DOOR
3	2'-4" 6'-8" 1 3/4"	FLUSH WOOD DOOR
4	2'-0" 7'-0" 3/4"	PLYWOOD DOOR
5	4'-0" 7'-0" 1"	T&G BATTEN DOOR
6	3'-4" 7'-0" 1"	T&G BATTEN DOOR
7	3'-8" 6'-8" 1 1/4"	SCREEN DOOR

WINDOW SCHEDULE		
NO.	WIDTH HEIGHT	REMARKS
A	2'-8" 3'-6"	STEEL UTILITY SASH
B	2'-8" 1'-10"	STEEL BASEMENT SASH



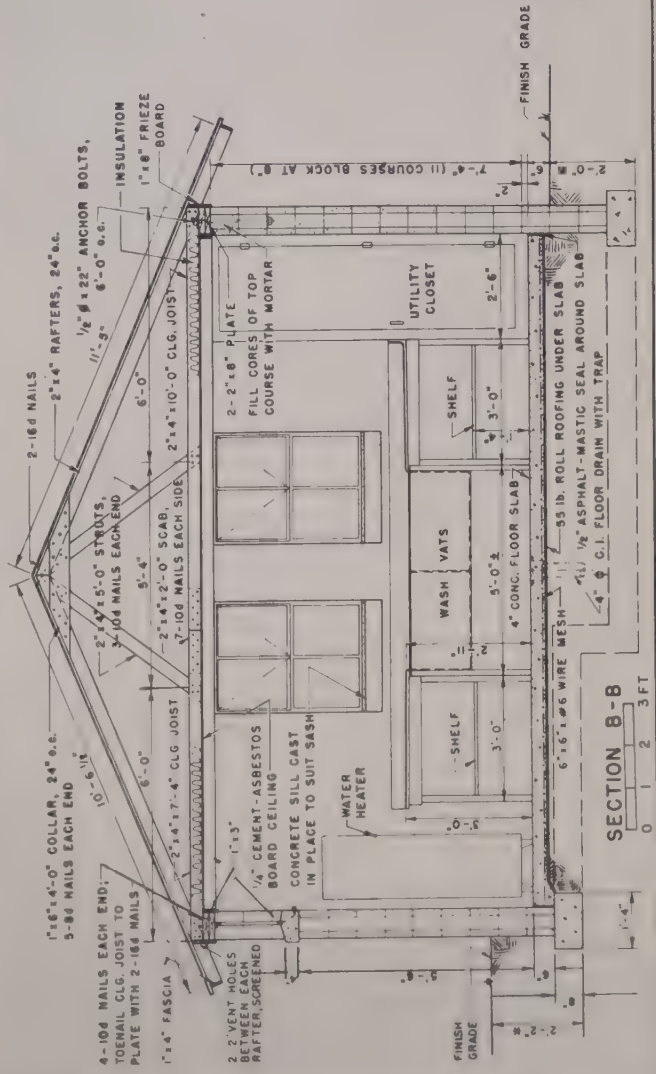


SECTION A-A

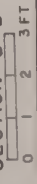


ELECTRICAL SYMBOLS

- S SWITCH
- ⊖ PULL SWITCH
- ⊕ LAMP
- ⊕ 40 WATT FLUORESCENT STRIP FIXTURE
- ⊕ SPOTLIGHTS TO ILLUMINATE BULK MILK TANK OPENINGS
- ⊕ NO FIXTURES TO BE MOUNTED DIRECTLY ABOVE OPENINGS OF BULK TANK
- ⊕ 250 WATT INFARED LAMPS
- ⊕ DOUBLE CONVENIENCE OUTLET GROUNDED
- ⊕ MILKER VACUUM PUMP 230 VOLT, 3P, 5N FUSED SWITCH
- ⊕ BULK MILK TANK 230 VOLT, 3P, 5N FUSED SWITCH
- ⊕ TANK TRUCK 230 VOLT
- ⊕ WATER HEATER 230 VOLT, 3P, 5N FUSED SWITCH
- ⊕ HEATER



SECTION B-B



COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND

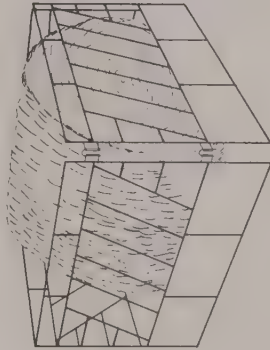
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

3-STALL MILKING PLANT

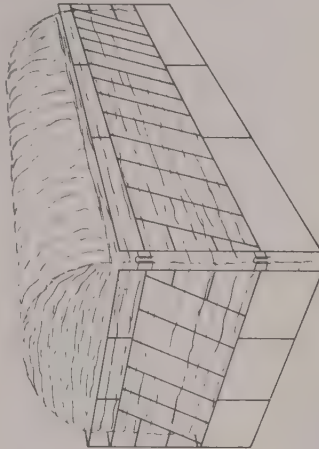
USDA '60 EX. 5875 SHEET 2 OF 2

NOTE
* VARIABLE DIMENSIONS

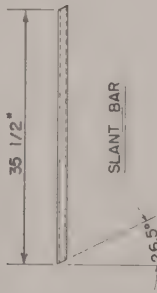
BILL OF MATERIAL (PER PANEL)	8'	10'	12'	14'	16'
1 1/2" X 16 GA. (.065") SQUARE TUBING	68'	83'	98'	113'	120'
16" X 20 GA. (.0359") SHEET STEEL	7' - 11"	10' - 1"	12' - 3"	14' - 5"	15' - 6"
1/4" X 1" STEEL BAR	12"	12"	12"	12"	12"
1" DIA. PIPE	12"	12"	12"	12"	12"
1/2" DIA. STEEL BAR	2' - 2"	2' - 2"	2' - 2"	2' - 2"	2' - 2"
APPROX. WEIGHT PER PANEL, LBS.	93	113	134	155	164
DIMENSION					
A	8' - 0"	10' - 2"	12' - 4"	14' - 6"	15' - 7"
B	2' - 6"	3' - 4"	4' - 0"	4' - 10"	5' - 2"



PERSPECTIVE



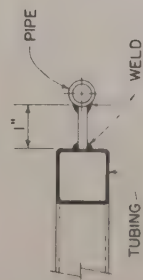
PERSPECTIVE



SLANT BAR

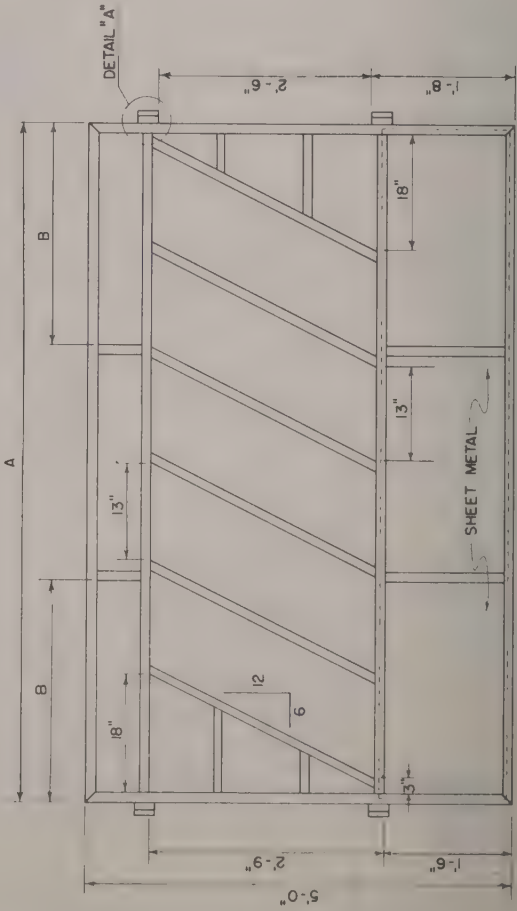
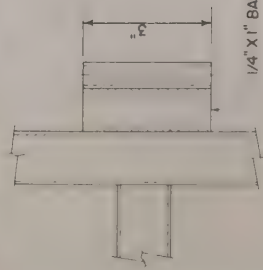
1/4" X 1" BAR

DETAIL "A"

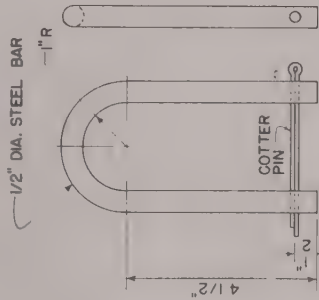


WELD

TUBING



FEEDER PANEL



PANEL CONNECTOR PIN



PINNED CORNER CONNECTIONS ALLOW PANELES TO COLLAPSE, THUS PROVIDING COMPLETE MAY CLEANUP

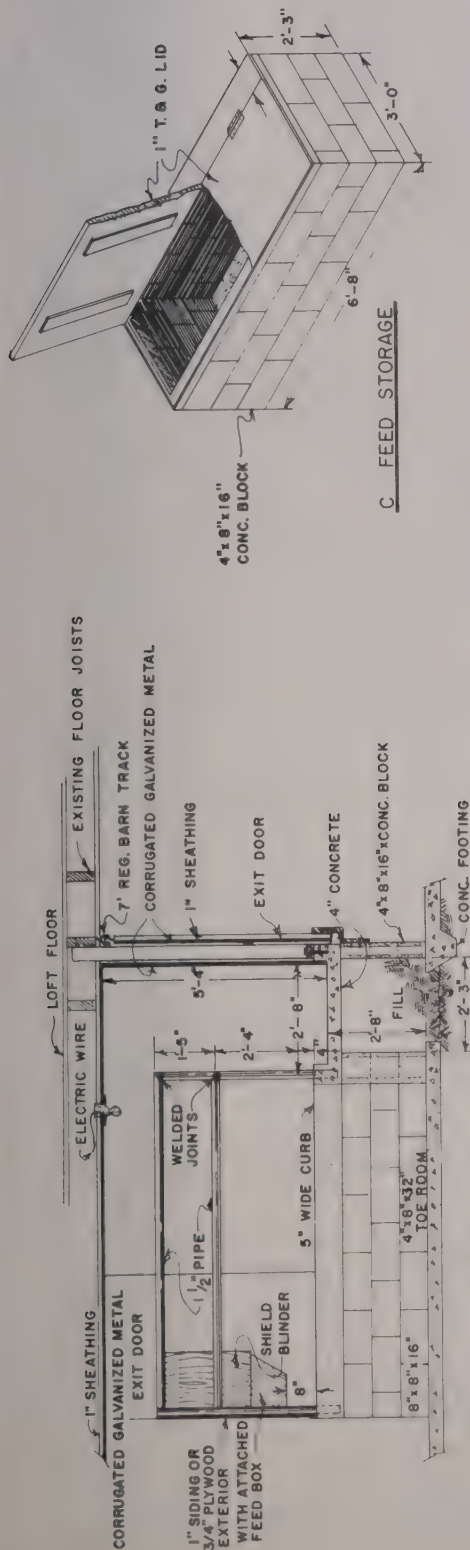
ADAPTED FROM OKLA. PLAN, OK-724-28

COOPERATIVE EXTENSION SERVICE
AGRICULTURAL ENGINEERING DEPARTMENT
VIRGINIA POLYTECHNIC INSTITUTE AND
STATE UNIVERSITY BLACKSBURG VIRGINIA

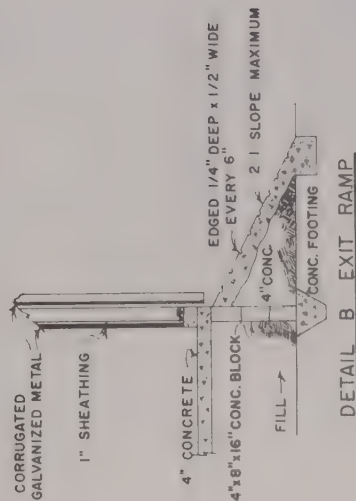
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

NOTE: 1 1/2" DIA. X 16 GA. (.065") ROUND TUBING MAY BE SUBSTITUTED FOR THE SQUARE TUBING

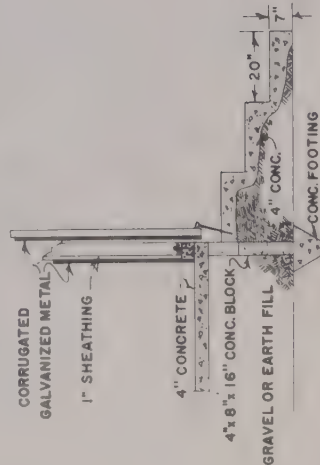
SLANT BAR FEEDER PANELES
VA '75
SHEET 1 OF 1



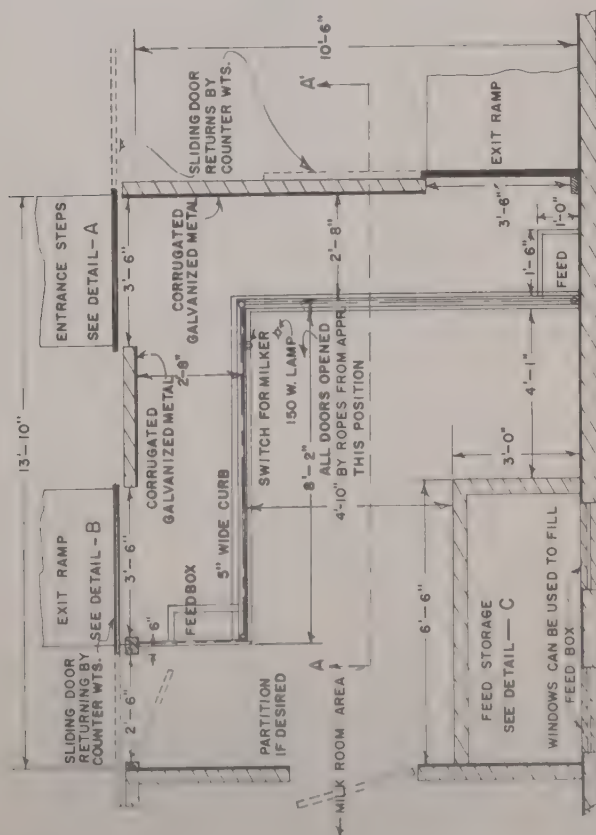
SECTION A-A'



DETAIL B EXIT RAMP



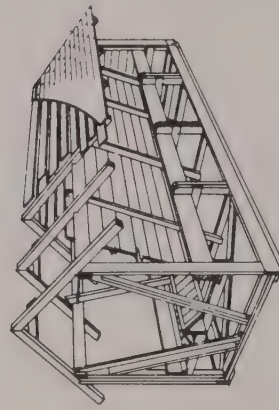
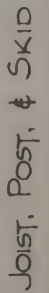
DETAIL A ENTRANCE STEPS



FLOOR PLAN

V TYPE

MICHIGAN STATE UNIVERSITY COOPERATIVE EXTENSION SERVICE AGRL. ENGINEERING DEPT., EAST LANSING	
V TYPE ELEVATED MILKING STALLS MANUFACTURING MILK PRODUCTION	
PLANNED RAA	APPR JSB
DRAWN	DATE 6-26-59
TRACED	SHEET 1 OF 1
CHECKED RAA	NO. 723-87-74

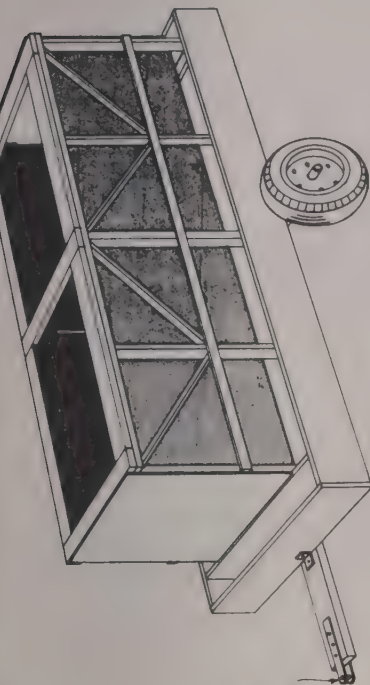


SIDE ELEVATION

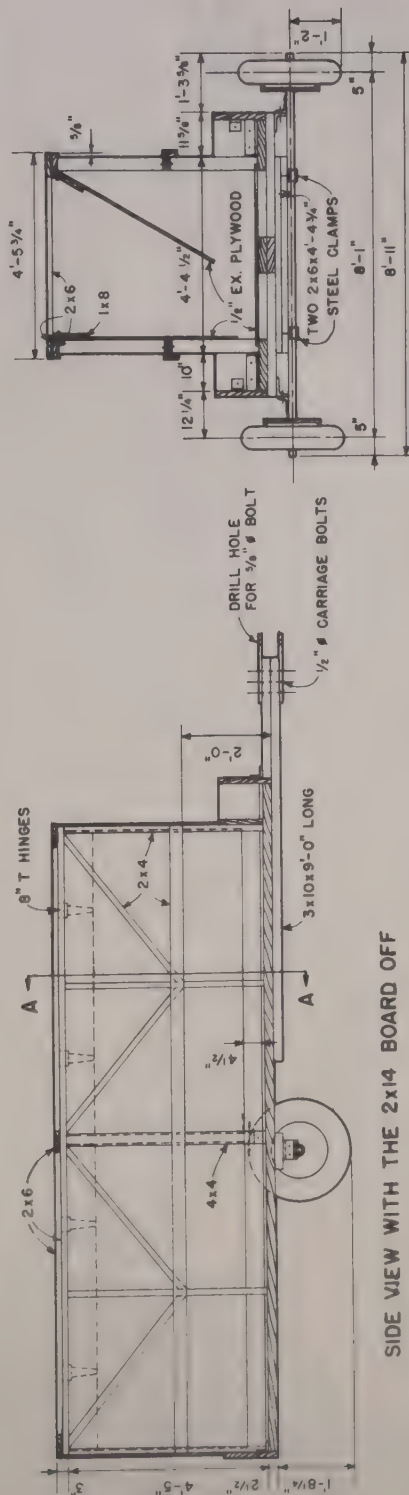
CATTLE SELF FEEDER

200 Bushel 12½ Bu. per Lin. Ft.

200 Bushel 12½ Bu. per Lin. Ft.



CONSTRUCTION DETAILS MAY BE MODIFIED
TO USE LUMBER AT HAND.
JOINTS SHOULD BE WELL NAILED. BOLT
THE METAL ANGLE IRON.
THIS CONSTRUCTION CAN BE ADAPTED FOR
TRAILER MOUNTING, SKIDS, OR PERMANENT,
IN-PLACE FEEDERS.



SIDE VIEW WITH THE 2x14 BOARD OFF

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF GEORGIA
UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

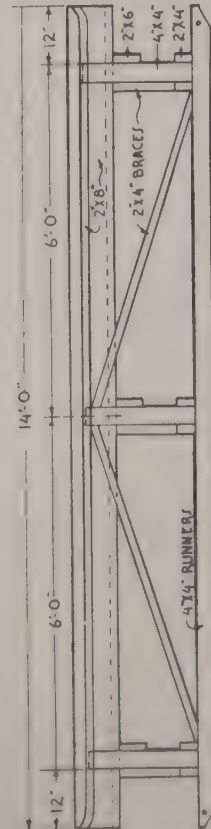
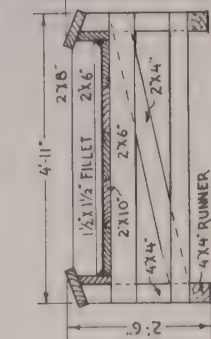
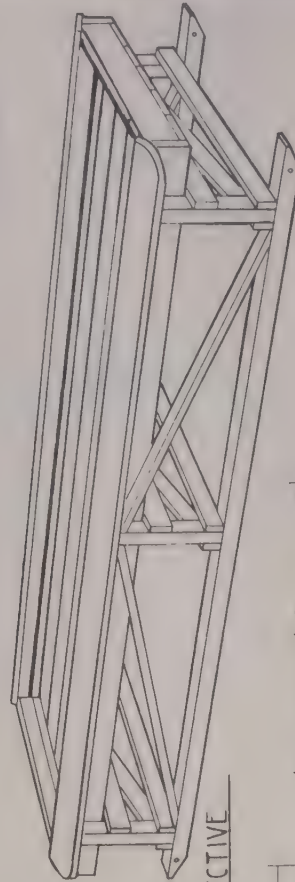
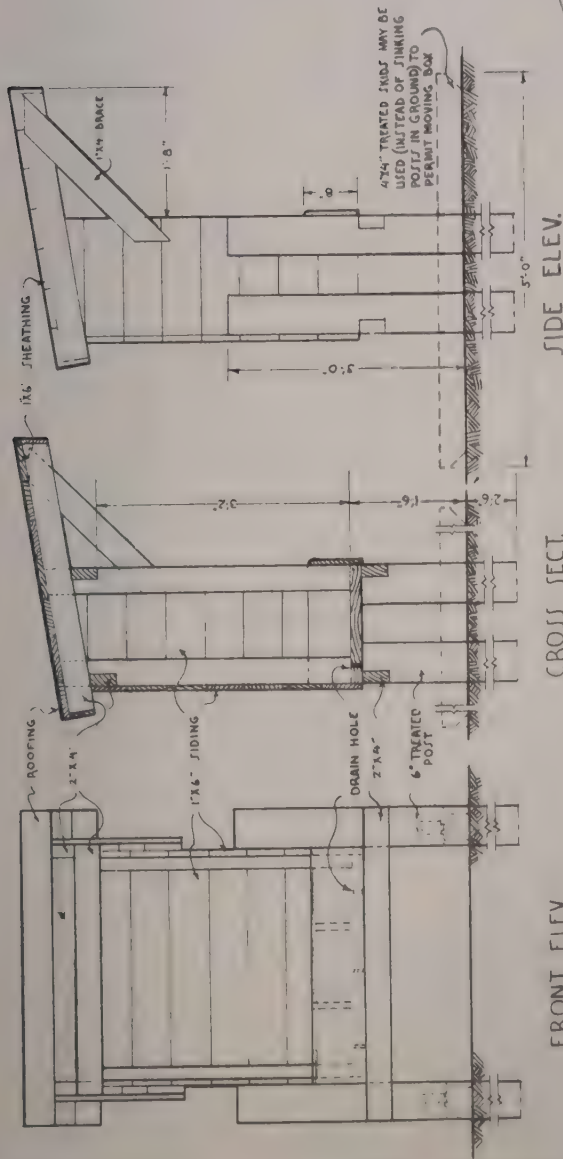
SELF-FEEDER FOR CATTLE

ORE. '68	EX. 6045	SHEET 1 OF 1
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MINERAL BOX

BILL OF MATERIALS

FOR FEED TROUGH	
5	2"x10" - 14'-0" LONG
4	2"x8" - 14'-0" "
1	2"x6" - 14'-0" "
1	2"x6" - 14'-0" "
3	4"x4" - 14'-0" "
2	2"x4" - 12'-0" "
3	2"x4" - 10'-0" "
2	18"x4" FLUE 14'-0" "

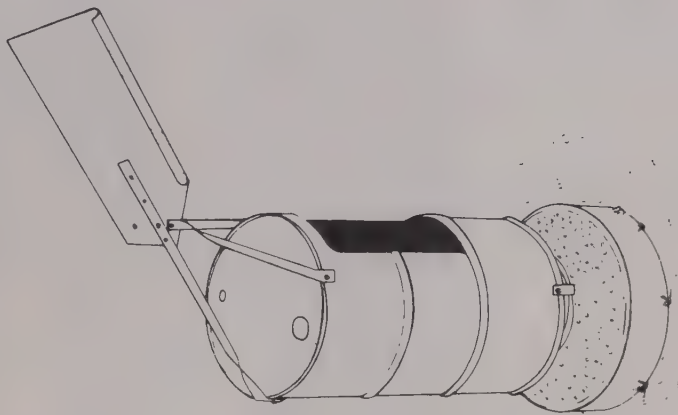


MINERAL BOX &
FEED TROUGH

COOPERATIVE EXTENSION WORK IN
AGRICULTURE & HOME ECONOMICS
COLLEGE OF AGRICULTURE
UNIVERSITY OF FLORIDA
AND U.S.D.A. COOPERATING

3/14/52

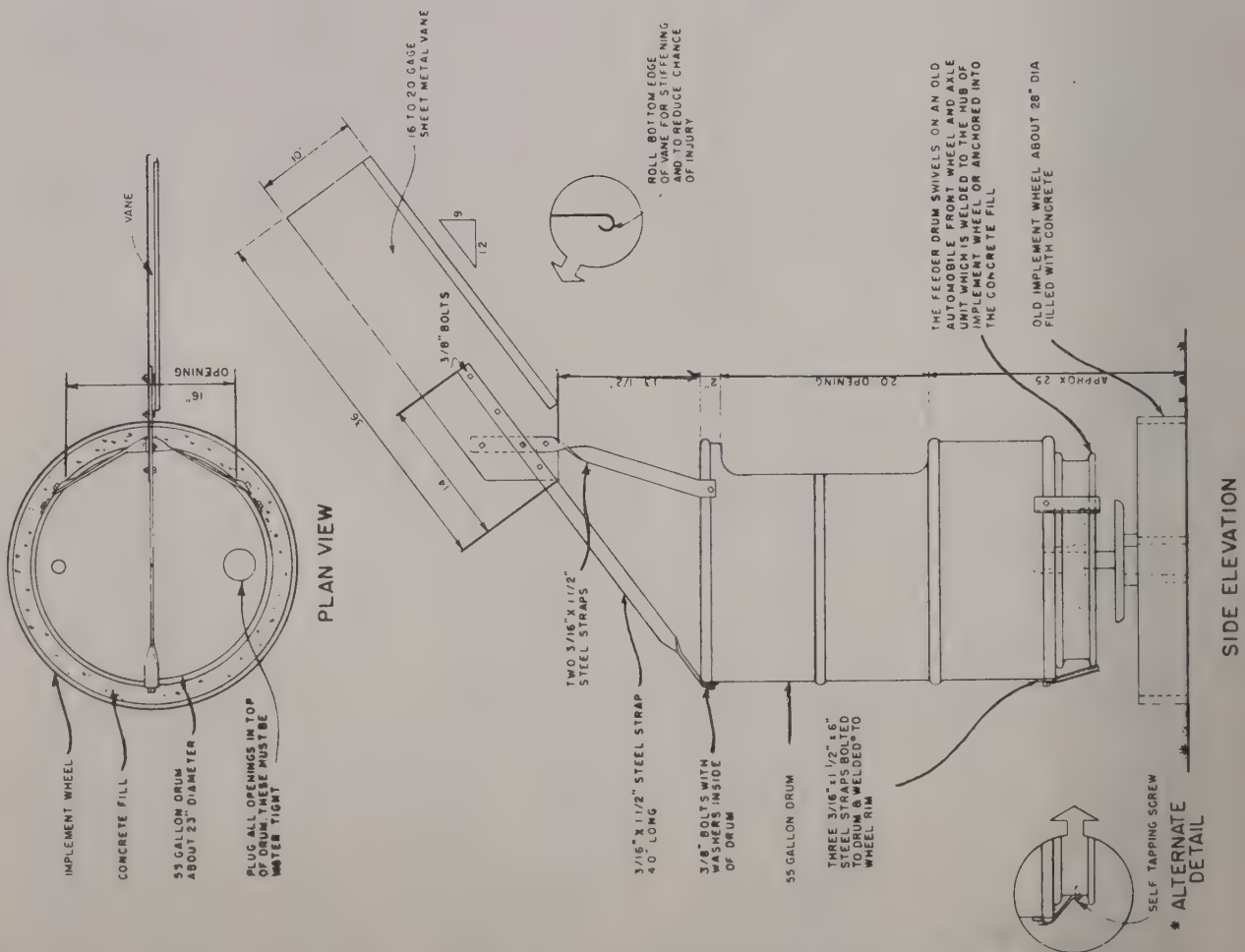
JMJ/GO FLA. 307 SHEET 1 OF 1

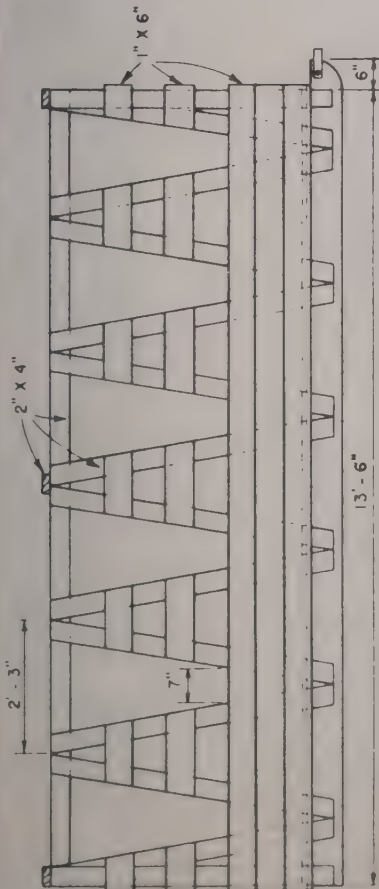


PERSPECTIVE VIEW

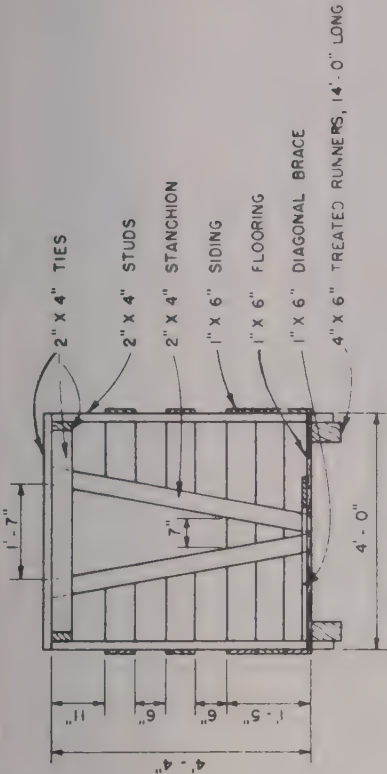
NOTE
FOR PROPER OPERATION, THE FEEDER SHOULD
BE SET ON A LEVEL SURFACE
PAINT OUTSIDE WITH ALUMINUM PAINT OR OTHER
RUST-PREVENTIVE COATING
COAT INSIDE OF DRUM WITH ASPHALT PAINT
REMOVE BURRS FROM EDGES OF OPENING
CUT IN DRUM

0 1 FT.





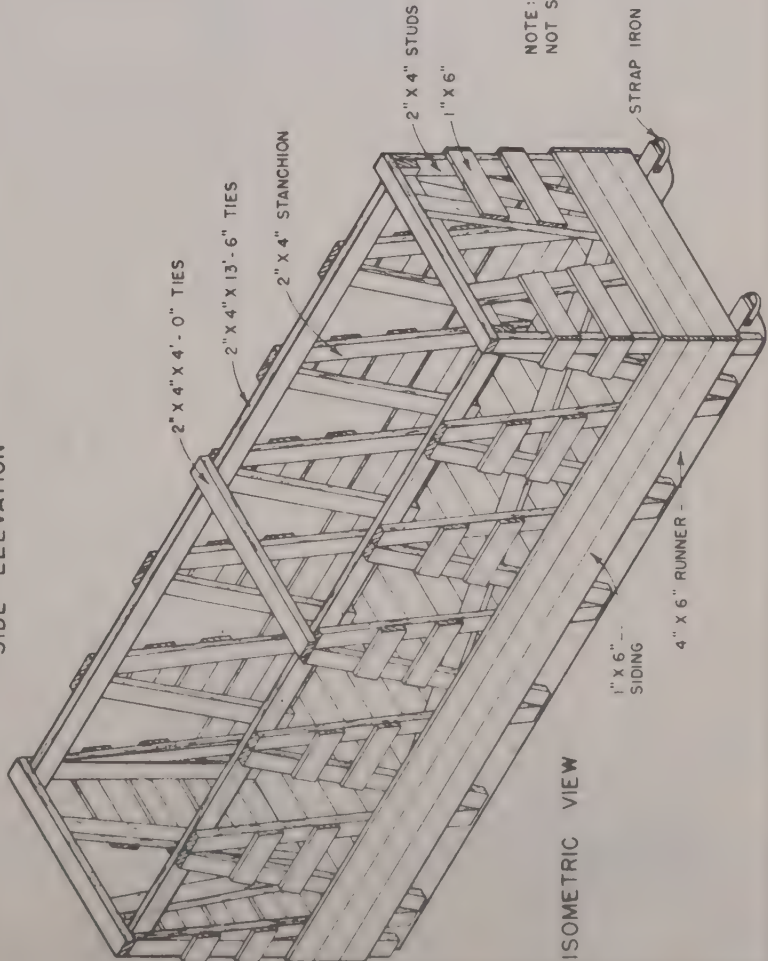
SIDE ELEVATION



SECTION

BILL OF MATERIALS

2 PCS	4" X 6" X 14'-0"	RUNNERS
2 PCS	2" X 4" X 13'-6"	TIES
2 PCS	2" X 4" X 3'-5 1/2"	TIES
3 PCS	2" X 4" X 4'-0"	TOP CROSS TIES
4 PCS	2" X 4" X 4'-8 1/2"	CORNER STUDS
28 PCS	2" X 4" X 4'-10 1/2"	STANCHIONS
6 PCS	1" X 6" X 13'-7 1/2"	SIDING - SIDES
6 PCS	1" X 6" X 4'-0"	SIDING - ENDS
3 PCS	1" X 6" X 16'-0"	SIDING - BETWEEN STANCHIONS
29 PCS	1" X 6" X 4'-0"	FLOORING
1 PC	1" X 6" X 14'-0"	DIAGONAL BRACE
4 LB	16 d	NAILS
4 LB	8 d	NAILS
2 EA	7" X 3/8"	BOLTS
2 FT	1" X 1/8"	STRAP IRON



ISOMETRIC VIEW

NOTE:
NOT SUITABLE FOR CATTLE WITH HORNS

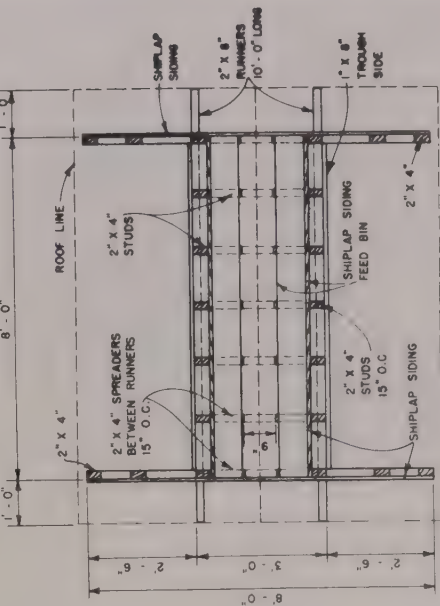
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

CATTLE HAY RACK

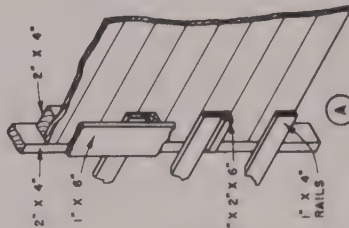
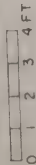
TEX. 51 EX. 5772 SHEET 1 OF 1

MOVABLE PANELS MAY BE FASTENED TOGETHER WITH WIRE

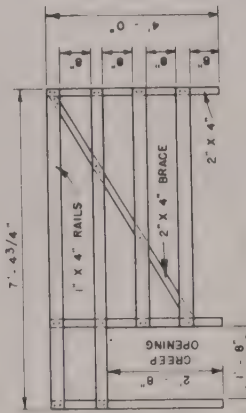
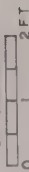


PLAN A-A

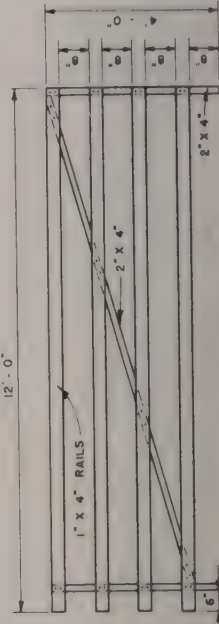
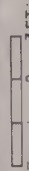
CALF CREEP FEEDER



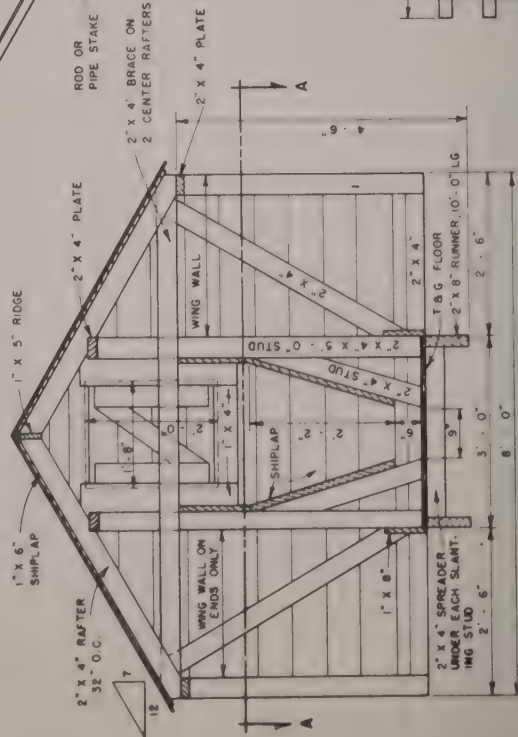
PANEL DETAIL AT CORNER OF BUILDING



MOVABLE END FENCE PANEL



MOVABLE SIDE FENCE PANEL



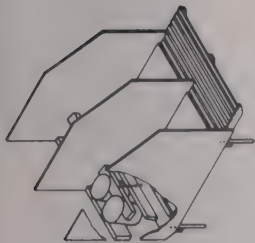
SECTION THROUGH SELF-FEEDER



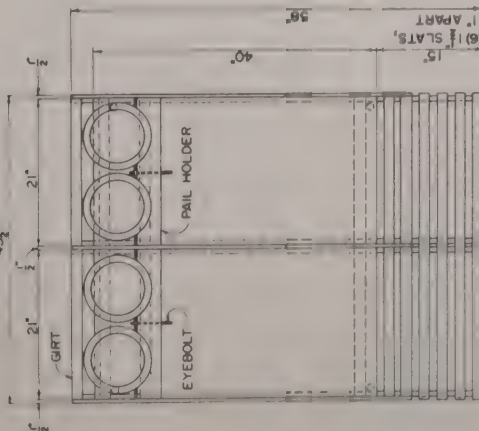
NOTE: RUNNERS, RAFTERS & BOTTOM RAIL OF PANEL TO BE TREATED WITH PRESERVATIVE.



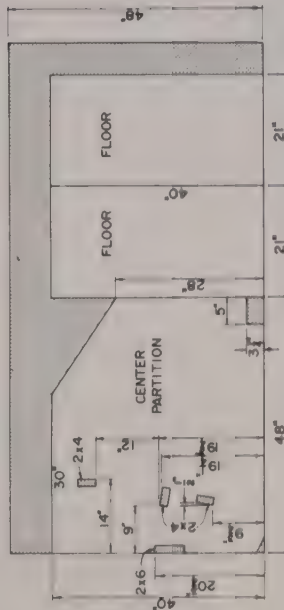
SLAT CUTTING DIAGRAM
HALF SIZE



ISOMETRIC VIEW



TOP VIEW
(NECK BAR REMOVED)



PLYWOOD CUTTING DIAGRAMS

MATERIALS:

PARTITIONS AND FLOOR

2 SHEETS 4x8x1/2
EXTERIOR PLYWOOD

JOISTS 1x3x58"

PAIL HOLDER, NECK BAR 2x4x42 1/2"

SUPPORT 2x6x43 1/2"

GIRT 2x6x21"

CLEAT 1x2x21"

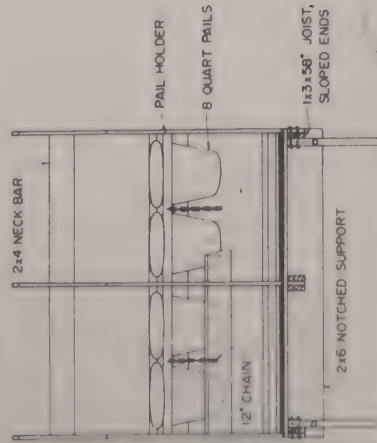
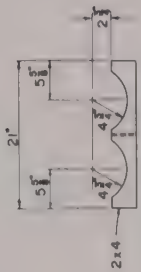
BLOCKING 1 1/2x3x40"

PIPE LEGS 1" DIA. 14" LONG

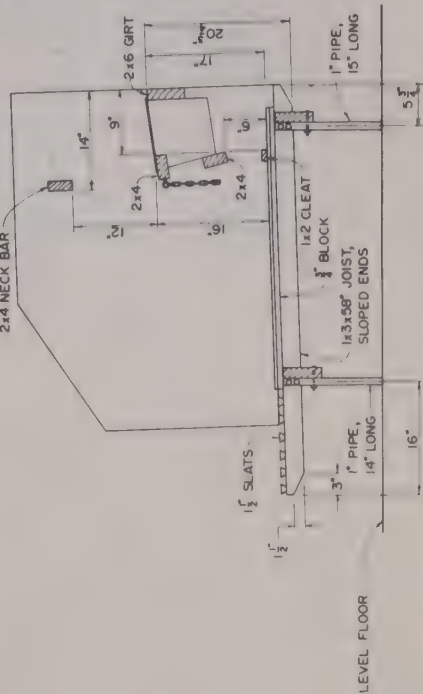
SLATS (HARDWOOD) 3x8x43 1/2"

EYEBOLTS, BOLTS, NAILS, CHAINS, 8 QUART PAILS

PAIL HOLDER
(SEE NOTE)



REAR VIEW



CROSS SECTION

NOTES

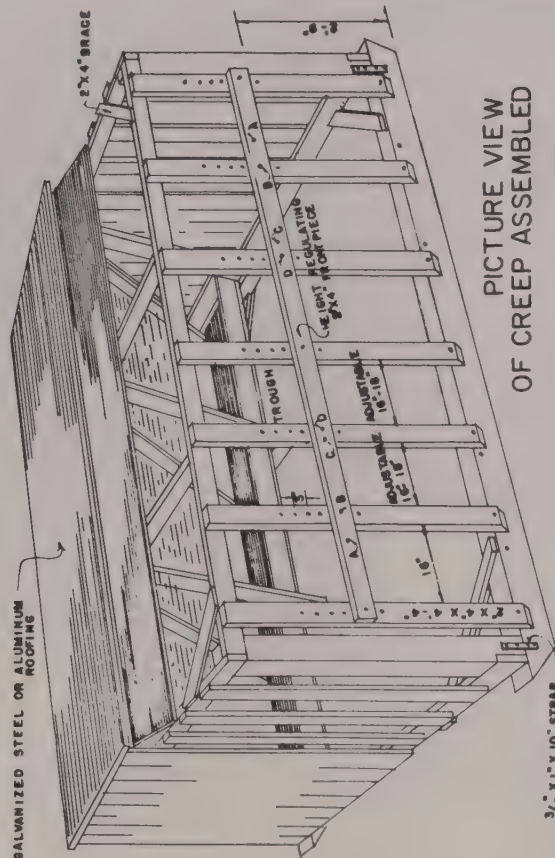
CHECK PAIL SIZE BEFORE STARTING
CONSTRUCTION
IF BEDDING IS NOT USED, REPLACE
FLOOR WITH 9 GAUGE EXPANDED
METAL

BASED ON: CORNELL UNIV. PLAN No. 837

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
AGRICULTURAL ENGINEERING DEPARTMENT
MICHIGAN STATE UNIVERSITY, E. LANSING
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

PORTABLE STALLS
FOR CALVES

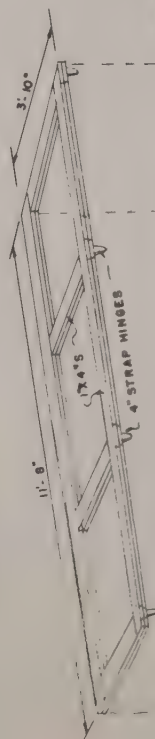
NY '71 EX. 6138 SHEET 1 OF 1
PLAN FILE NO. 871



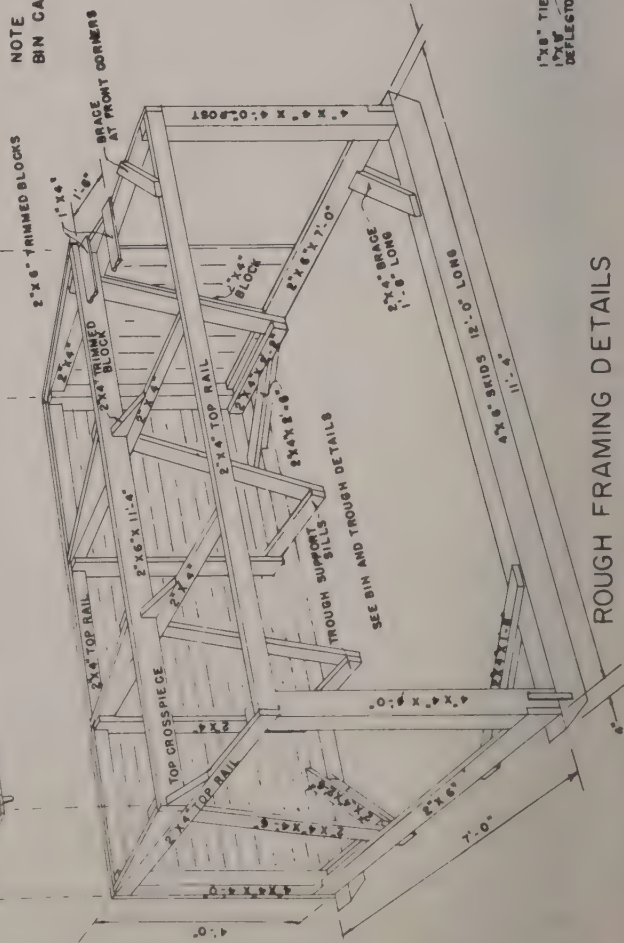
PICTURE VIEW
OF CREEP ASSEMBLED

3/16" X 1" X 10" STRAP
IRON AT EACH CORNER
FASTEN WITH 3" LAG SCREWS

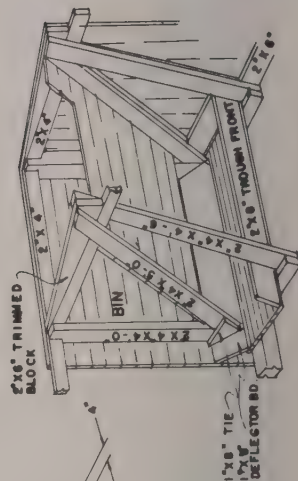
NOTE
BIN CAPACITY APPROX. 40 BU.



CROSS SECTION



ROUGH FRAMING DETAILS

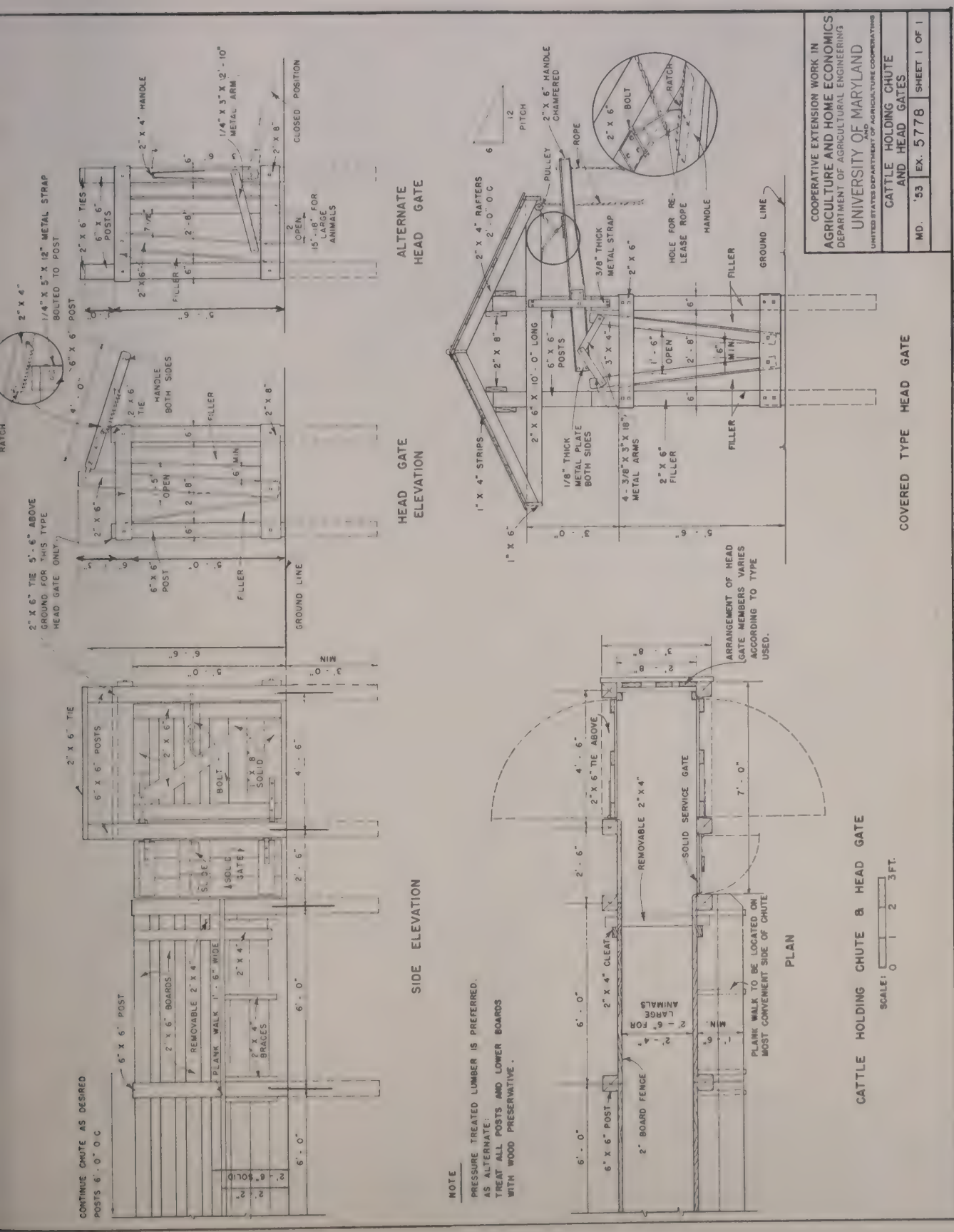


BIN & TROUGH DETAILS

COOPERATIVE EXTENSION WORK IN
AGRICULTURE & HOME ECONOMICS
AGRICULTURAL ENGINEERING DEPARTMENT
VPI BLACKSBURG, VIRGINIA
U.S. DEPT. OF AGRICULTURE COOPERATIVE

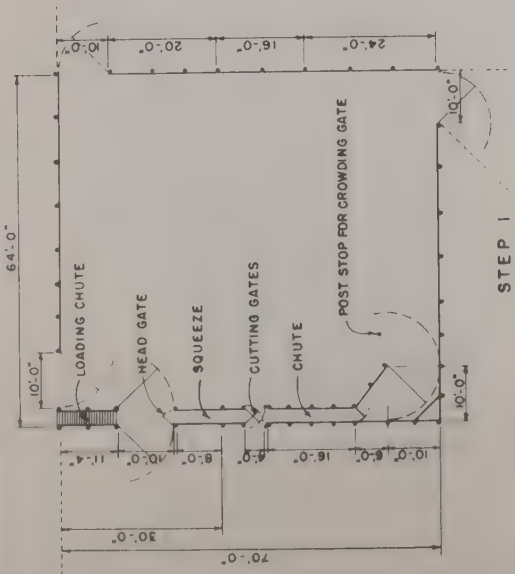
CALF CREEP

DRAWN BY B.F.K.	JAN 1971	C-625
CHECKED BY M.B.	SHEET 1	

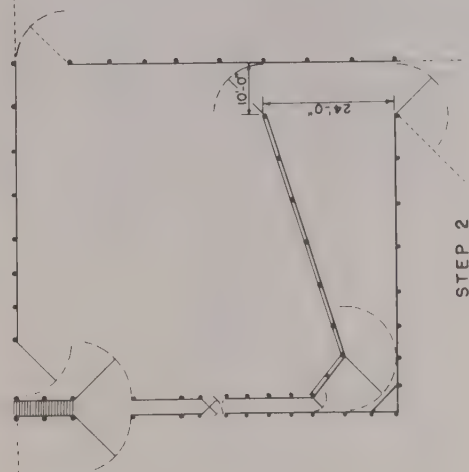


CATTLE HOLDING CHUTE & HEAD GATE

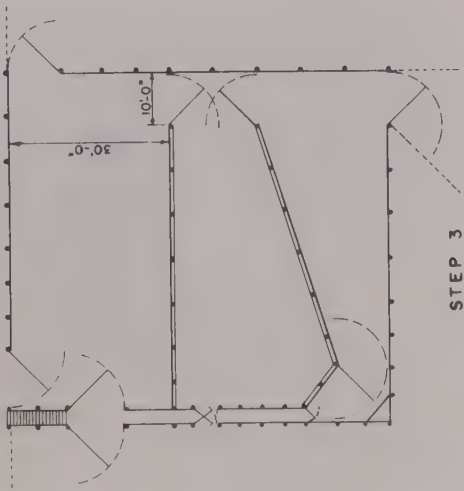
SCALE: 0 1 2 3 FT.



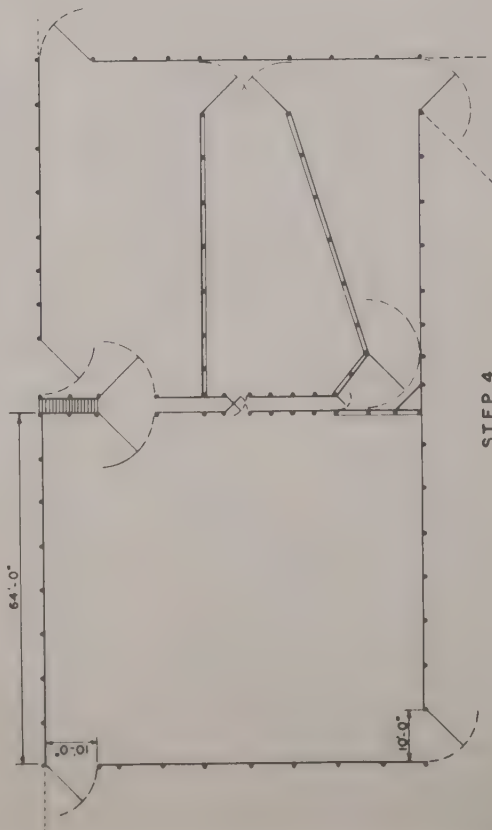
STEP 1



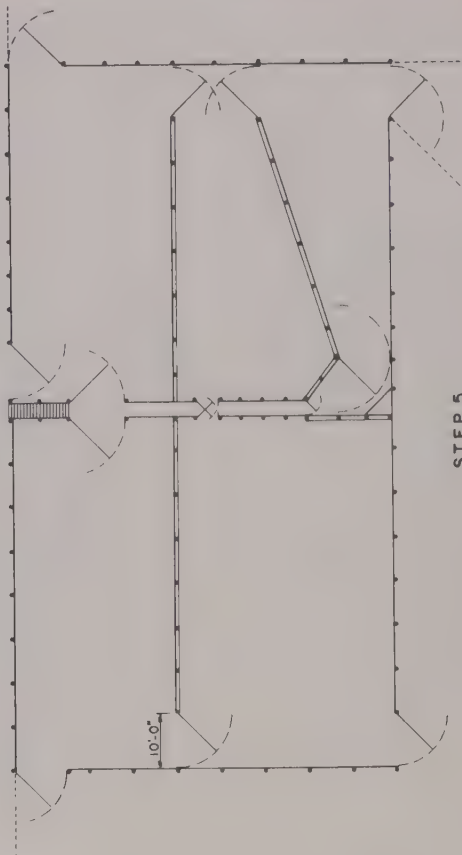
STEP 2



STEP 3

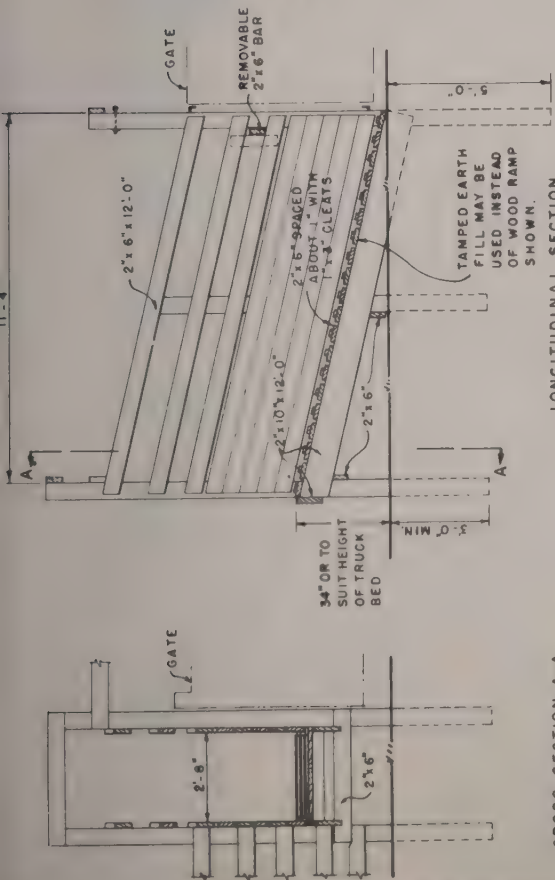


STEP 4



STEP 5

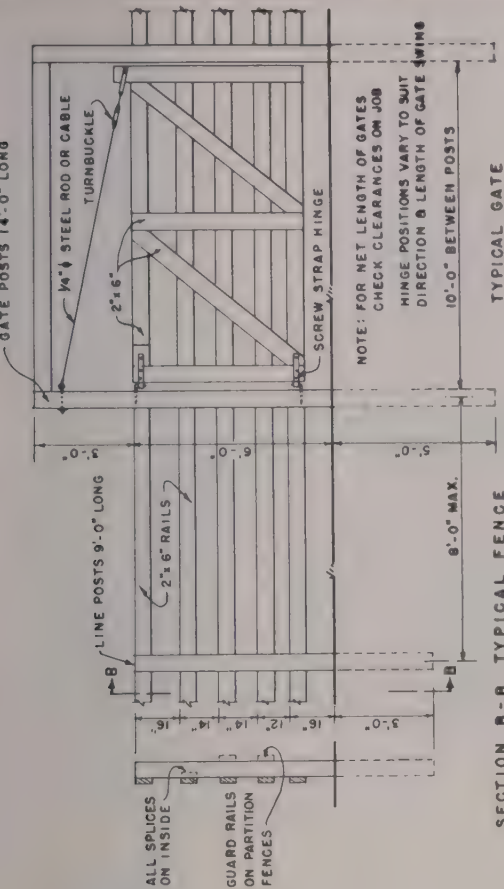
- NOTE: 1. STEP 1 INCLUDES NECESSARY EQUIPMENT. MAX. CAPACITY ABOUT 200 HEAD
2. STEPS 2 & 3 PROVIDE ADDED CONVENIENCE WITH SAME CAPACITY.
3. STEPS 4 & 5 SHOW COMPLETION OF CORRAL FOR DOUBLE THE ORIGINAL CAPACITY.



CROSS SECTION A-A

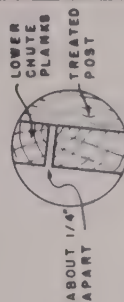
LONGITUDINAL SECTION

LOADING RAMP

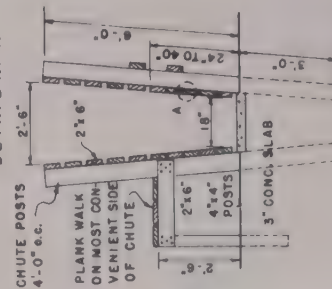


TYPICAL GATE

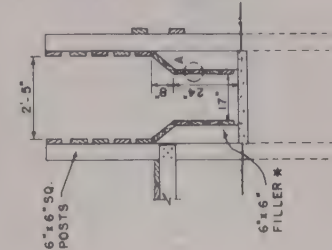
SECTION B-B TYPICAL FENCE



DETAIL AT "A"



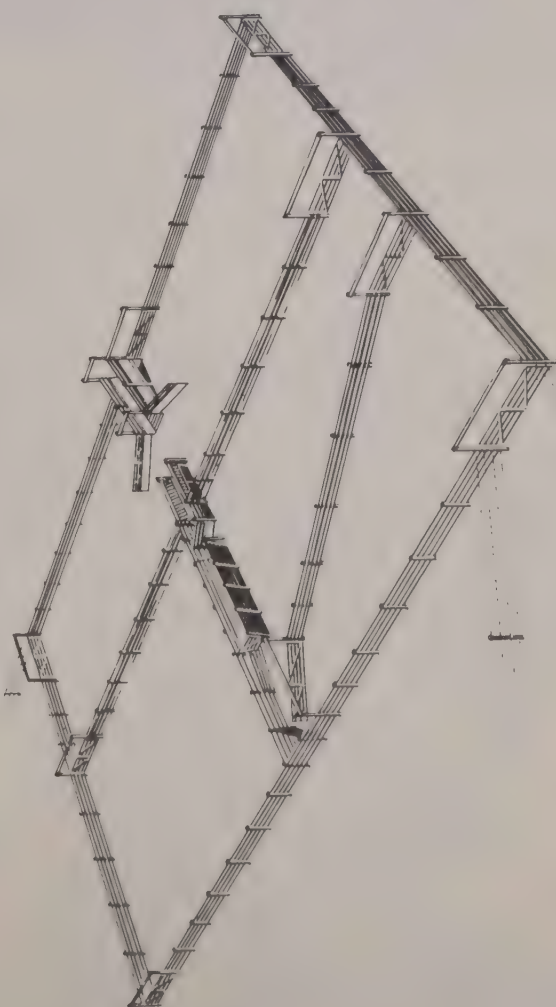
SECTION THRU CHUTE

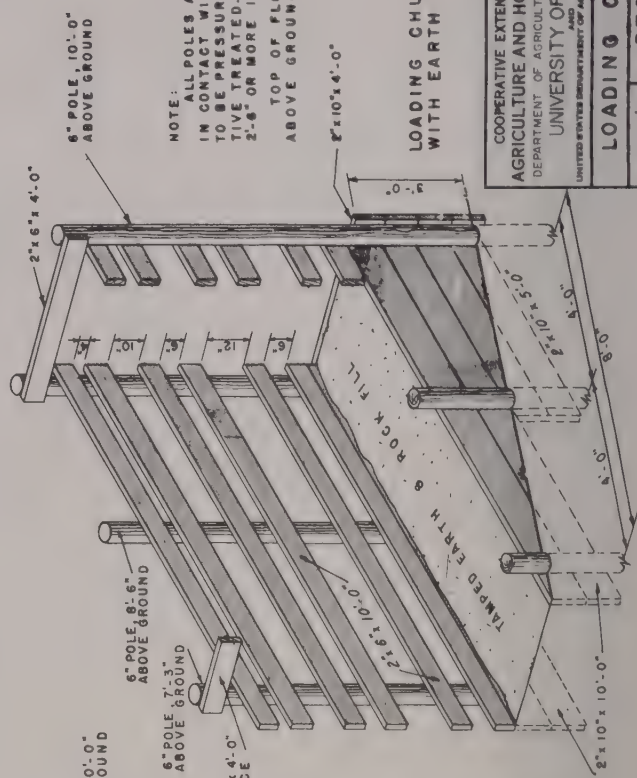
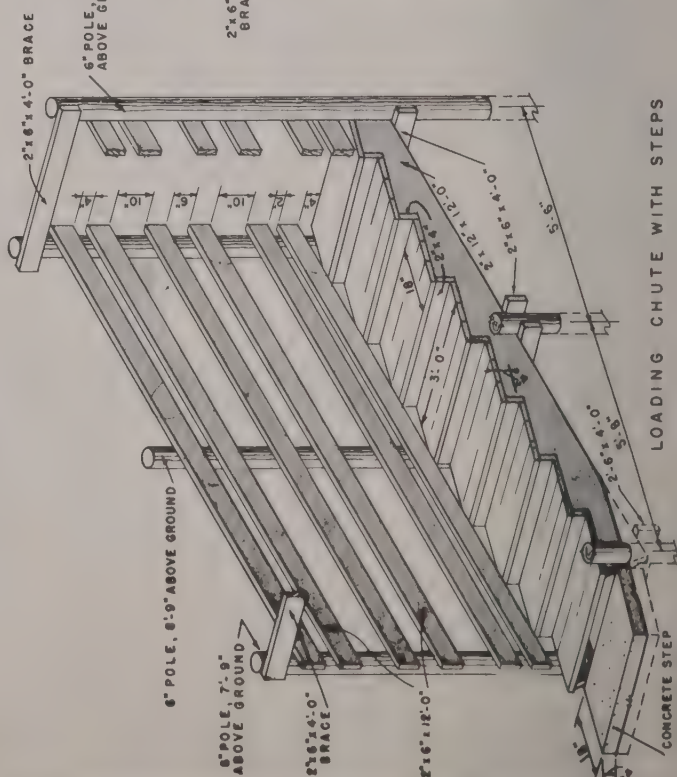
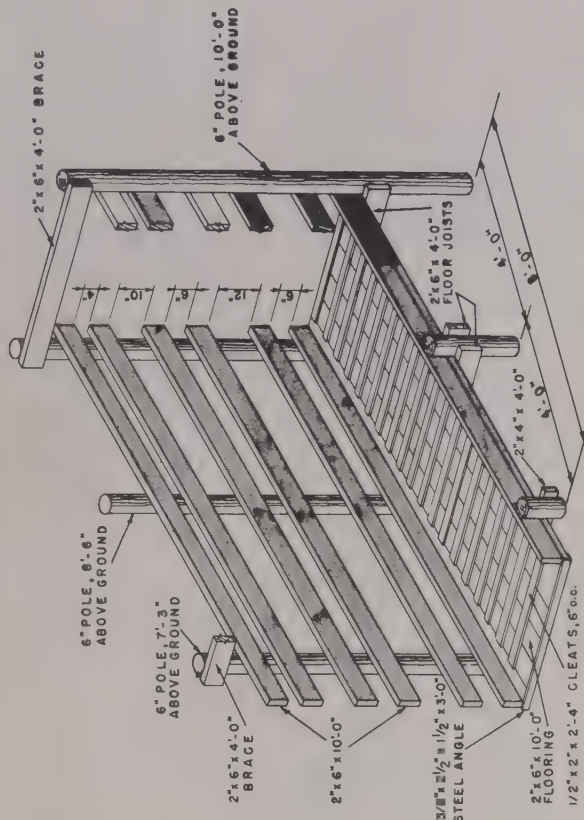
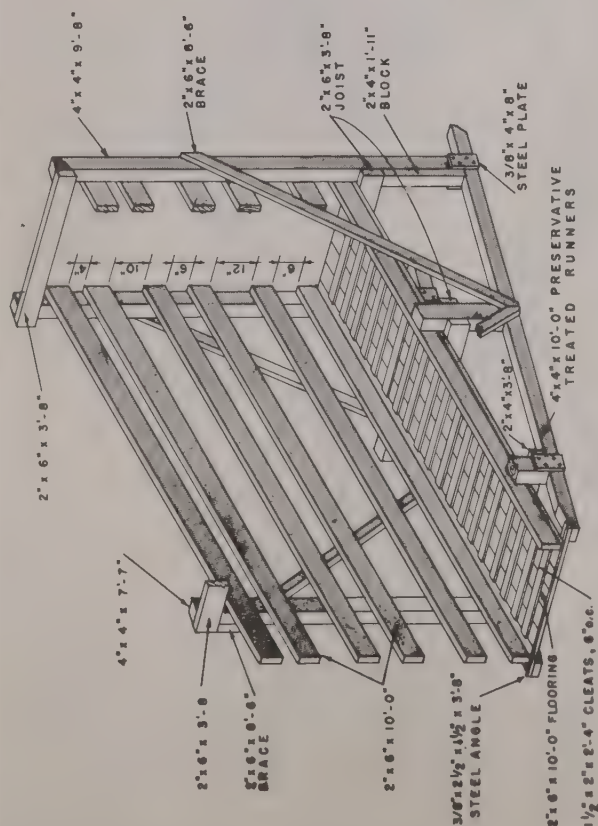


ALTERNATE CHUTE

* IF DESIRED, NARROW SECTION OF CHUTE MAY BE MADE REMOVABLE

NOTE: ALL WOOD IN CONTACT WITH EARTH SHOULD BE PRESSURE TREATED WITH CREOSOTE OR OTHER PRESERVATIVE





NOTE:
ALL POLES AND WOOD
IN CONTACT WITH GROUND
TO BE PRESERVE PRESERVA-
TIVE TREATED. POLES SET
2'-6" OR MORE IN GROUND.
TOP OF FLOOR 3'-0"
ABOVE GROUND.

LOADING CHUTE
WITH EARTH RAMP

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATION

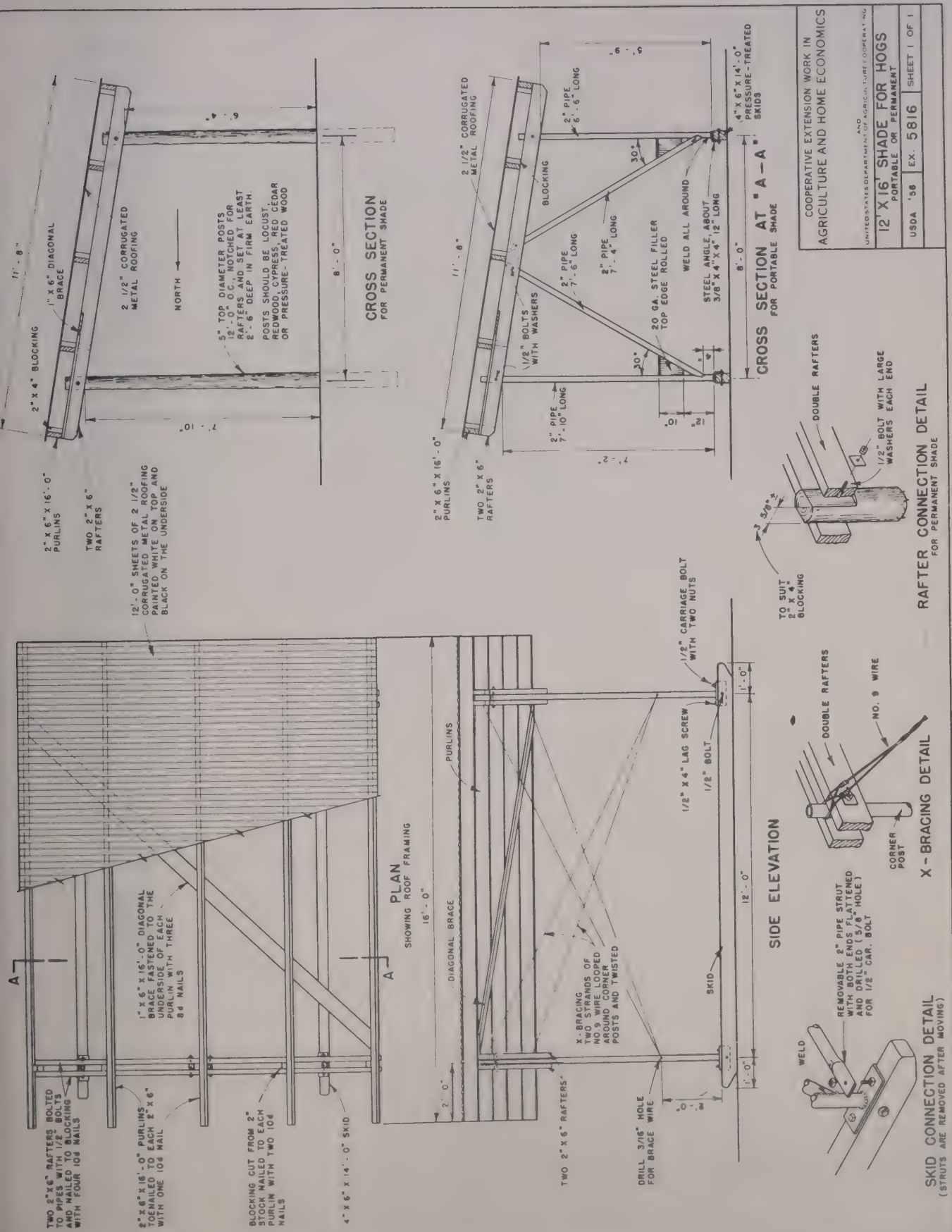
LOADING CHUTES

OKLA. '54	EX. 8793	SHEET 1 OF 1
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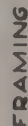
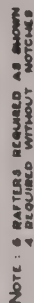
SWINE BUILDINGS

AND

EQUIPMENT



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS		
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
12' X 16' SHADE FOR HOGS		
PORTABLE OR PERMANENT		
USDA '56	EX. 5816	SHEET 1 OF 1



BER

10	2"	2"	8"	0"
12	2"	4"	8"	0"
4	2"	4"	0"	0"
1	2"	4"	6"	0"
3	2"	6"	12"	0"
1	2"	8"	16"	0"
8	1"	12"	10"	0"
1	1"	8"	10"	0"

OR ROUGH " x 2"

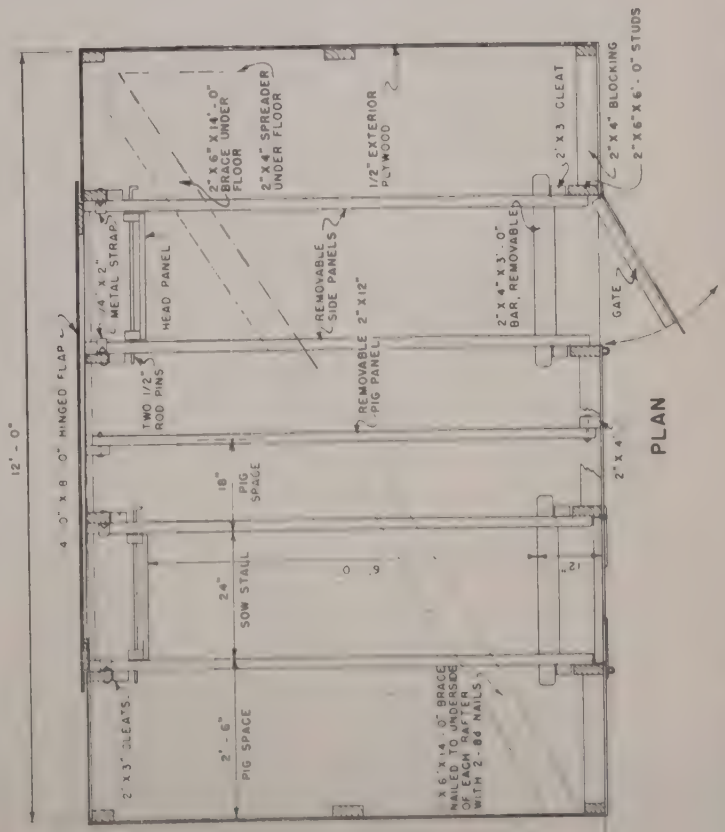
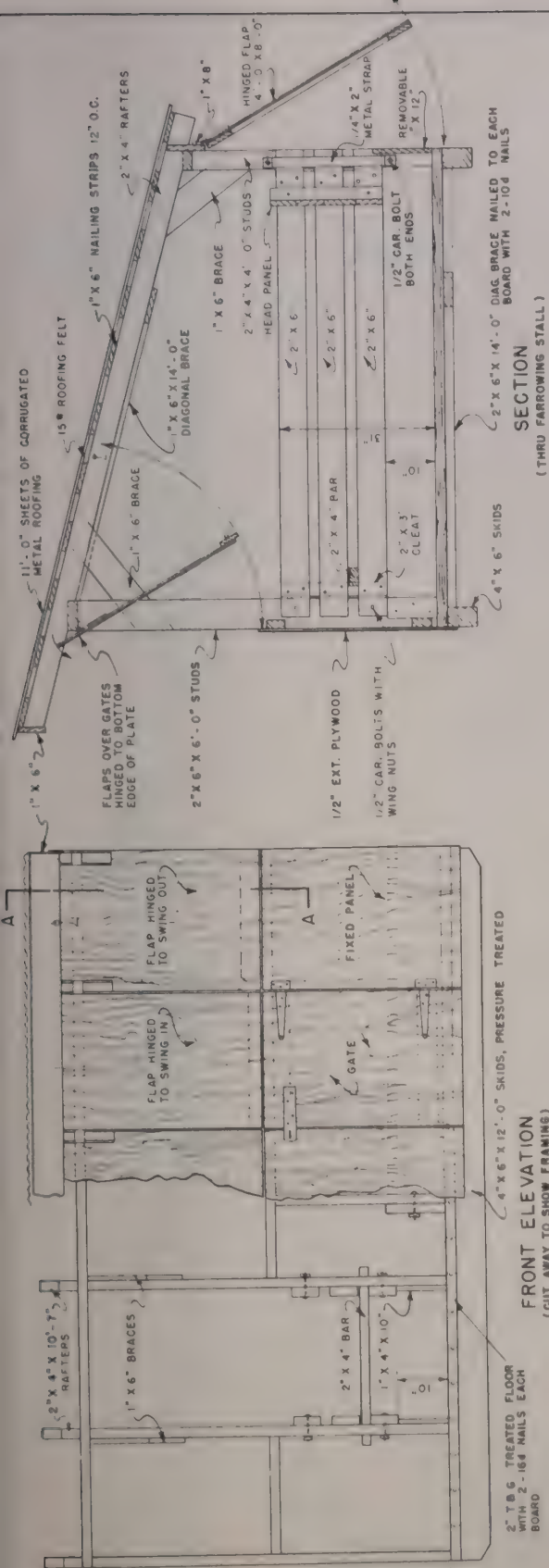
2 1/2 LBS 16 D COMMON
2 1/2 .85 8 D *
1 1/2 LBS 6 D *
1 .8" GALV NAILS
8 - 5" HEAVY STRAP HINGES ISCR
10" 0" GALV IRON RIDGE ROLL
10 SHEETS V CRIMP GALV IRON
2' X 1' 26 GA
12 - 3/8" X 5" BOLTS

BOTH ENDS SHEATHED WITH 1", 2" S
USE 1" x 4" BATTENS
USE 2" x 4" S BOLTED TO EACH
HAFTER FOR JOE SUPPORT WHEN
OPEN, SPACING WHEN OPEN
APPROX 40"
DOOR ON ONE END ONLY

ANIMAL HUSBANDRY DEPARTMENT
AGRICULTURAL ENGINEERING DEPARTMENT
UNIVERSITY OF GEORGIA ATHENS, GEORGIA

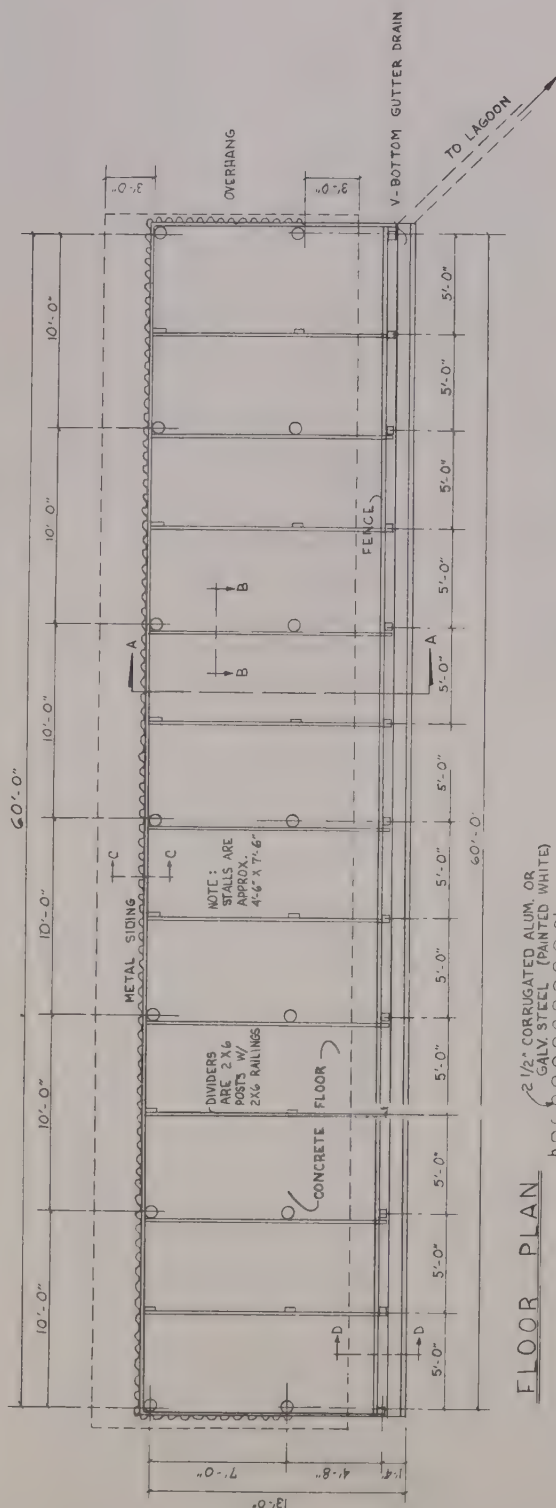
REGENTS OF THE UNIVERSITY SYSTEM OF GEORGIA
AND THE
UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATING

5273
DRAWN BY
CHECKED BY
APPROVED BY

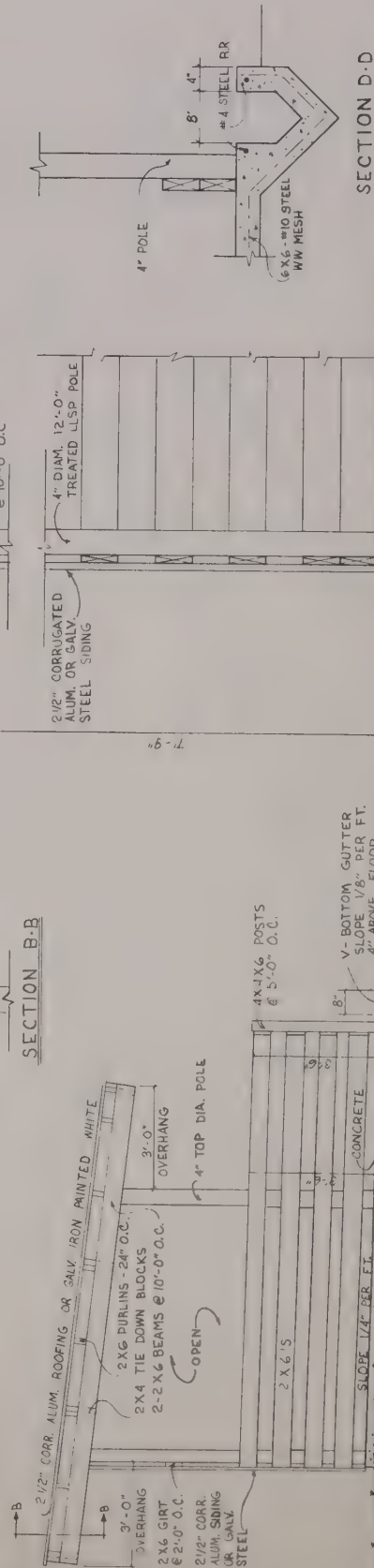
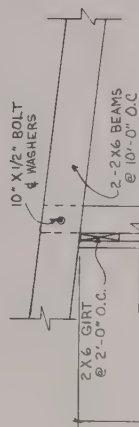
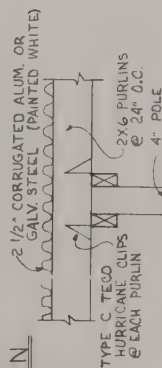


COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS		
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
TWO PEN MOVABLE HOG HOUSE TWO REMOVABLE FARROWING STALLS		
USDA '36	EX 5821	SHEET 1 OF 1

SECTION A-A
(FLAP OPEN)



FLOOR PLAN

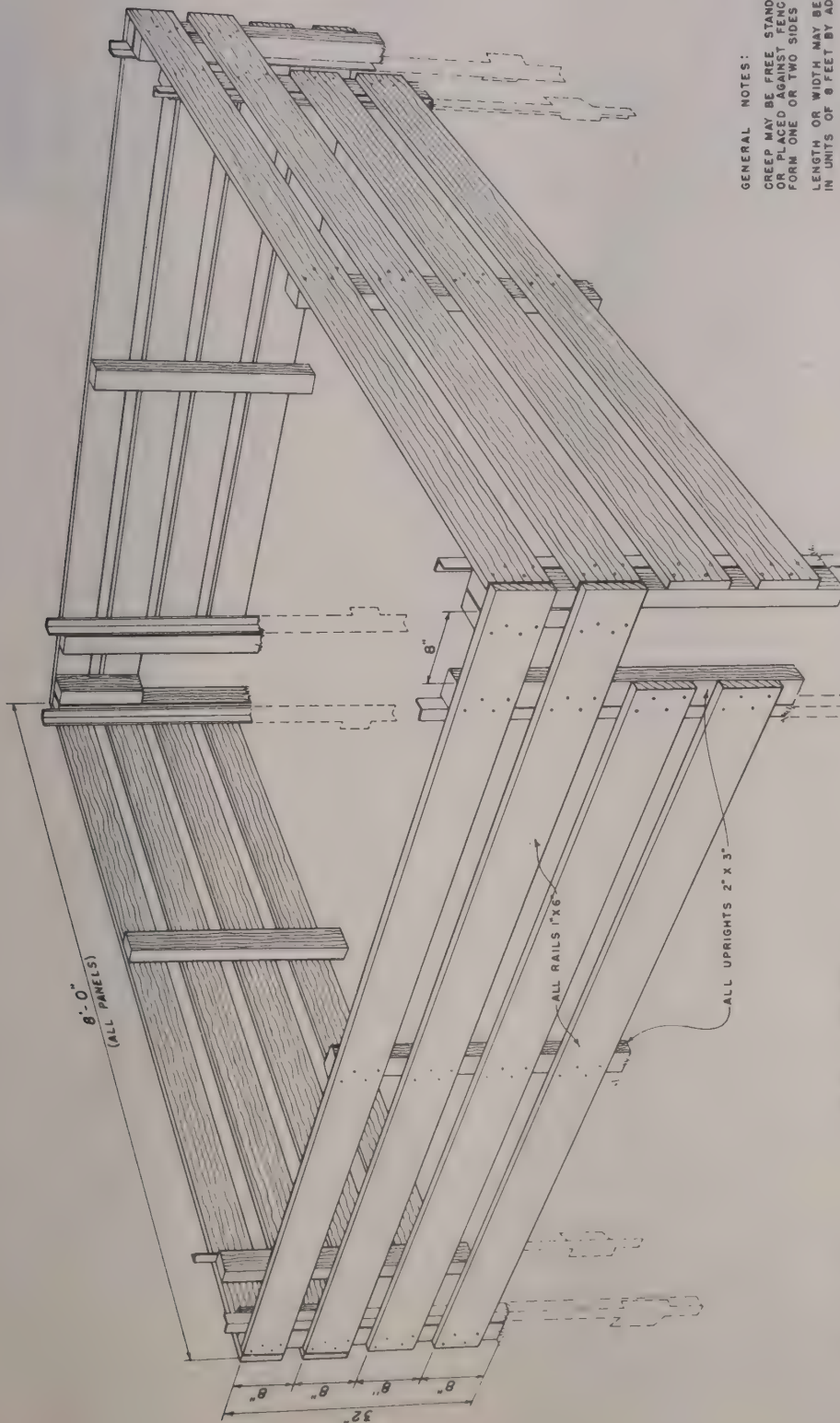


SECTION D·D

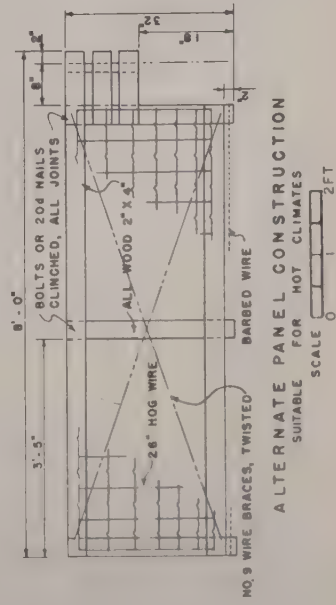
FLORIDA AGRICULTURAL EXTENSION SERVICE		JOB NO. FLA. 544	
INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES		DATE 8 - 6 - 68	
UNIVERSITY OF FLORIDA		DRAWN BY T	
AND USDA COOPERATING		CHECKED BY S L E	
LOW - COST COVERED SWINE UNIT		APPROVED BY T L S	
FOR FLORIDA		SHEET 1 OF 1	
EXT. AGR. ENGINEER — GAINESVILLE, FLA.			

CROSS SECTION A-A

SECTION C.C



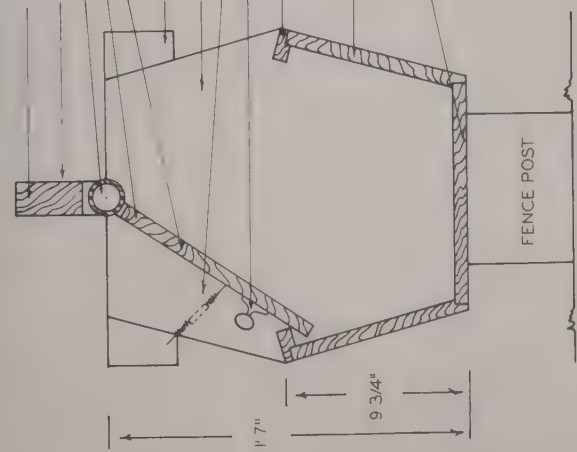
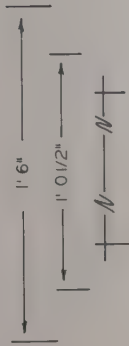
PERSPECTIVE VIEW
SHOWING A 4-PANEL CREEP IN FIELD



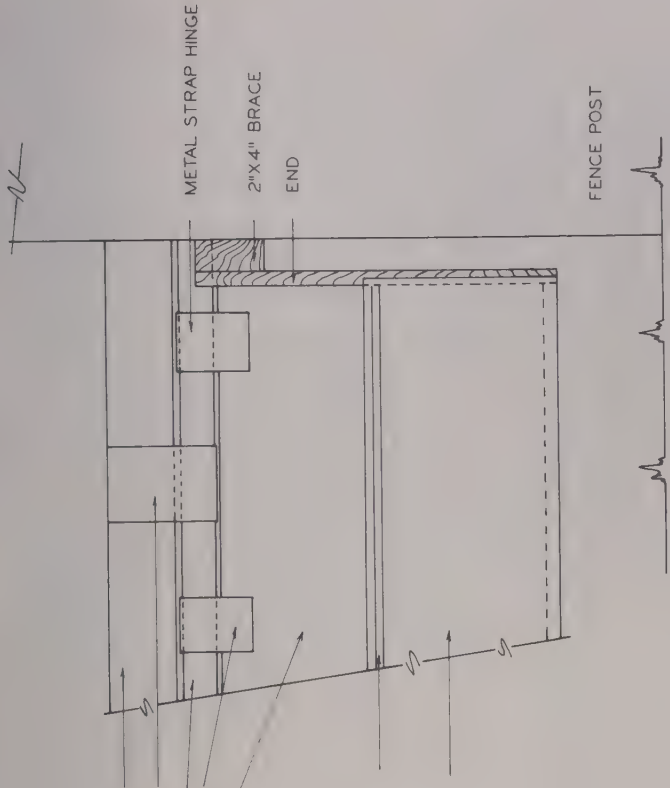
ALTERNATE PANEL CONSTRUCTION
SUITABLE FOR HOT CLIMATES

GENERAL NOTES:
CREEP MAY BE FREE STANDING AS SHOWN, OR PLACED AGAINST FENCE WHICH WILL FORM ONE OR TWO SIDES OF CREEP.
LENGTH OR WIDTH MAY BE INCREASED IN UNITS OF 8 FEET BY ADDING PANELS.
PANELS ARE WIRED TO DRIVEN POSTS FOR SUPPORT.
FOR LONGER USEFULNESS ALL WOOD SHOULD BE TREATED WITH PRESERVATIVE.

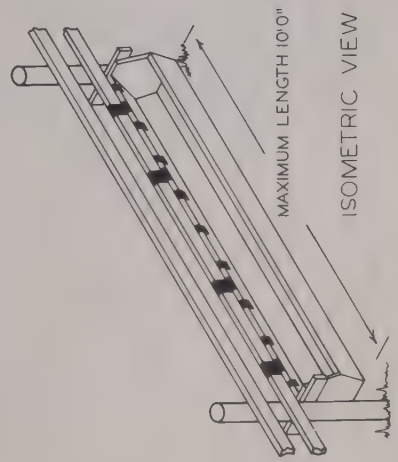
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS DEPARTMENT OF AGRICULTURAL ENGINEERING UNIVERSITY OF MARYLAND AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING		
CREEP PANELS FOR PIGS		
USDA '56	EX 5827	SHEET 1 OF 1



END SECTION



ELEVATION



ISOMETRIC VIEW

ADAPTED FROM PLANS OF:
T. J. HAYNES
O'BRIEN, FLA.

FLORIDA AGRICULTURAL EXTENSION SERVICE Department of Food and Agricultural Sciences University of Florida & USDA Cooperation			
SCALE	APPROVED BY:	DRAWN BY: A. R. M.	REVISED: V. T. B.
DATE: 6-7-65	J. C. S.		
FENCE LINE FEEDING - TROUGH FOR SWINE			DRAWING NUMBER
			524

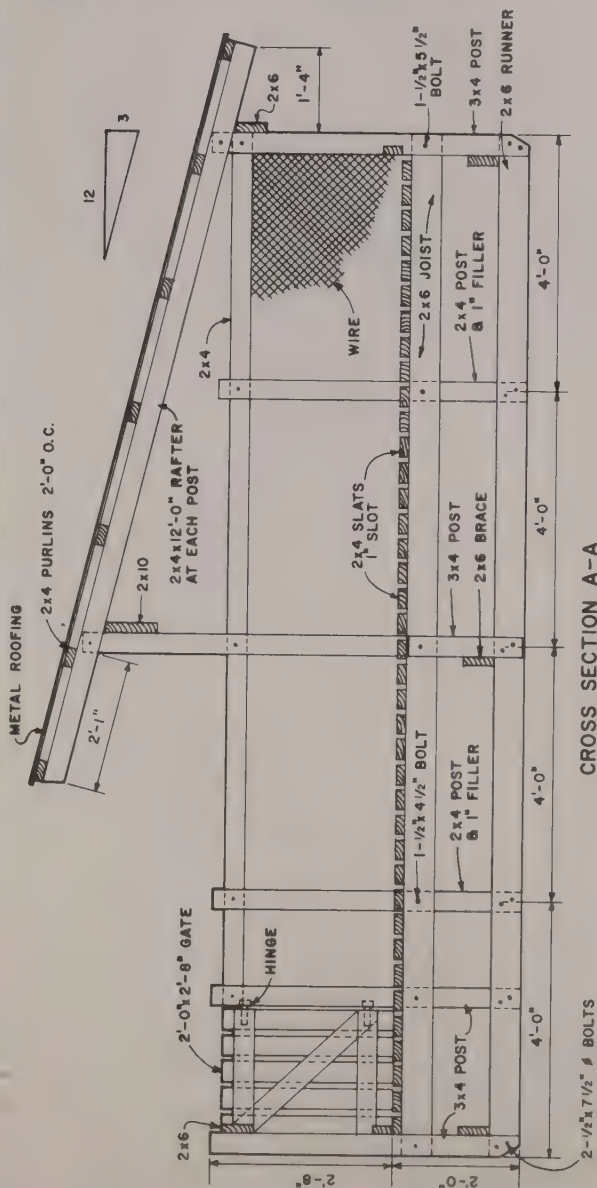
LIST OF MATERIALS:

BRACES	6 PCS. 2x6x5'-0"
GATE MATERIAL	2 PCS. 1x4x10'-0"
RAILING	2-4" T-HINGES
GIRDERS AND TOP	1 PC. 2x10x16'-0"
HARDWARE	2 PCS. 2x6x14'-0"
	2 PCS. 2x6x16'-0"
	22-1/2x7/8" BOLTS
	36-1/2x5/8" BOLTS
	3/4x4 1/2" BOLTS
JOISTS	4 PCS. 2x6x16'-0"
POSTS	4 PCS. 3x4x5'-0"
	2 PCS. 3x4x7'-0"
	5 PCS. 3x4x1'-10"
	4 PCS. 2x4x4'-10"
	2 PCS. 3x4x2'-0"
RAFTERS	4 PCS. 2x4x12'-0"
ROOFING MATERIAL	-195 SQ. FT. METAL ROOFING
RUNNERS	5 PCS. 2x6x16'-0"
PURLINS	7 PCS. 2x4x16'-0"
SLATS	41 PCS. 2x4x14'-0"
WATERER	-HOG, WITH ELECTRIC HEATING ELEMENT AND PIPE
WIRE	-3' 0x60-0" OF 1" CHAIN LINK WIRE FENCING OR EQUIVALENT
	* PRESSURE TREATED

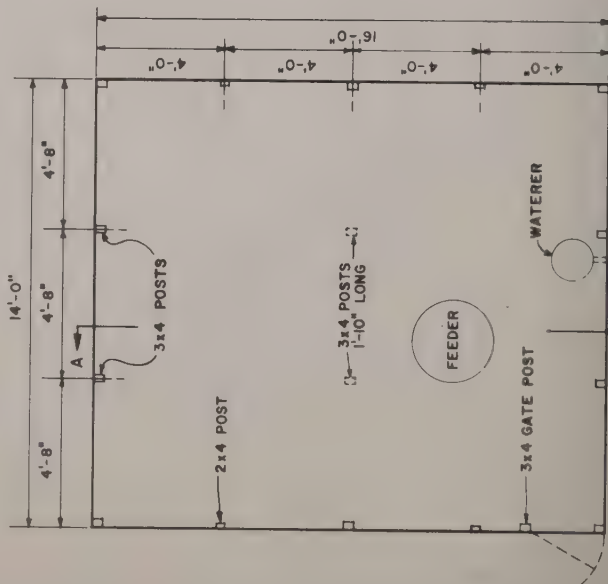
NOTE:
GREEN OAK SLATS SPACED 3/4" APART. WHEN DRIED, SLOT WILL BE 1".
ALL LUMBER EXCEPT RAFTERS, PURLINS, & SLATS TO BE PRESSURE TREATED.

ALTERNATE ROOF

HEIGHT OF ROOF MAY BE INCREASED BY ALTERING LENGTH OF 3x4 POSTS SUPPORTING ROOF, SO THAT A MAN CAN STAND UPRIGHT & SO THAT A LARGE FEEDER CAN BE OPENED & REFILLED UNDER THE ROOF.

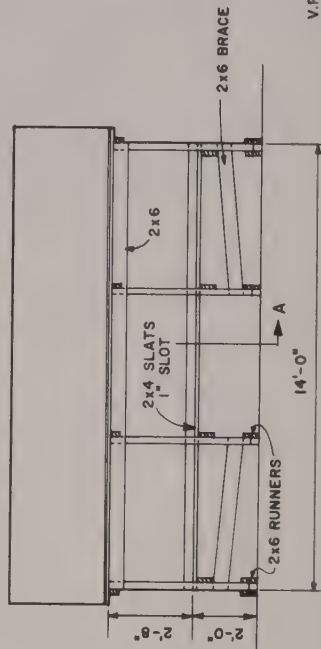


CROSS SECTION A-A



FLOOR PLAN

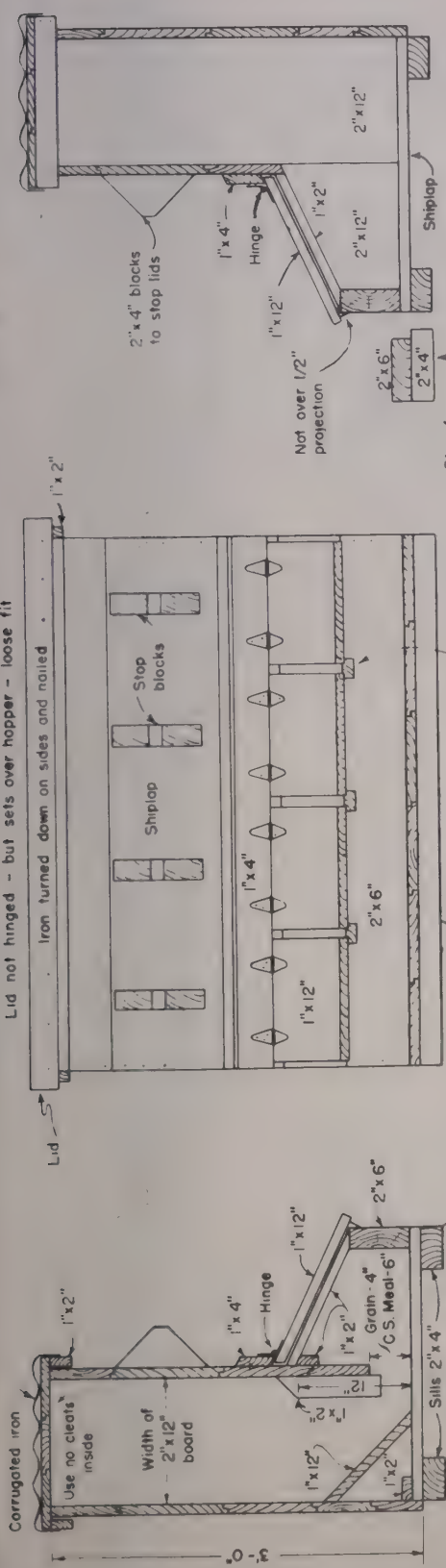
REAR FRAMING



NOTE:
AFTER EACH GROUP OF HOGS IS FINISHED, MOVE UNIT TO NEW POSITION. CLEAN WASTE FROM OLD POSITION. CAPACITY 30 HOGS AND FOR FINISHING MORE HOGS, PROVIDE ADDITIONAL UNITS.
PROVIDE ONE WATERER WITH HEATING ELEMENT.

V.P.I. PLAN G-1,1,2

Lid not hinged - but sets over hopper - loose fit



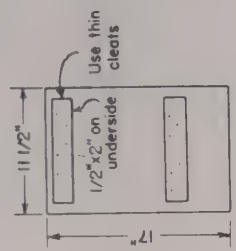
END VIEW

FRONT VIEW

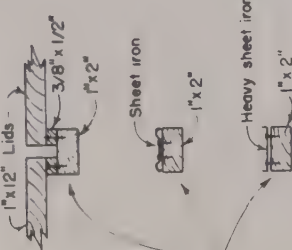
SECTION

BILL OF MATERIAL

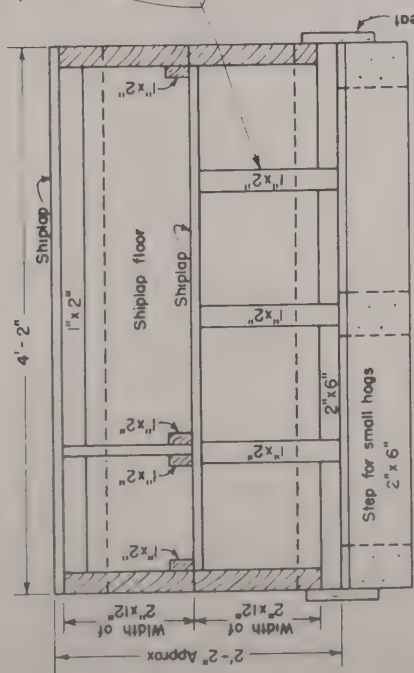
- (Fir lumber is easier to work than hard pine.)
- 1-2'x4'x10'
 - 1-2'x12'x8'
 - 1-2'x6'x9'
 - 1-1'x12'x14'
 - 3-1'x2'x12'
 - 1-1'x4'x4 1/2'
 - 1-1/2'x2'x8'
 - 1-3/8'x1/2'x10'
 - 45 board 'feet shiplap (to cut 4'-2" and 2'-2")
 - 1 piece sheet iron 2'x4'-9"
 - 4 prs.-4" strap-hinges (heavy)
 - Paint, 1/4 gal.
 - Nails, 16d, 8d, 6d, 4d, 3d



TROUGH LIDS

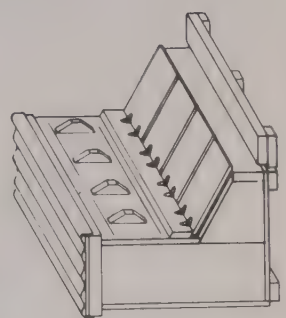


Three ways of rainproofing trough divider strips. Sections of 1'x2's shown

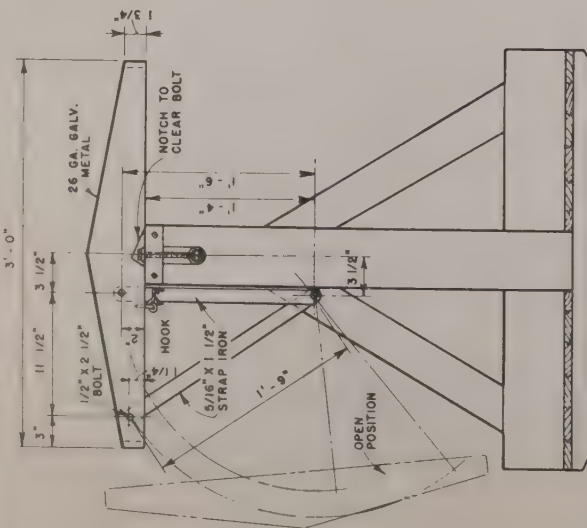


FLOOR PLAN

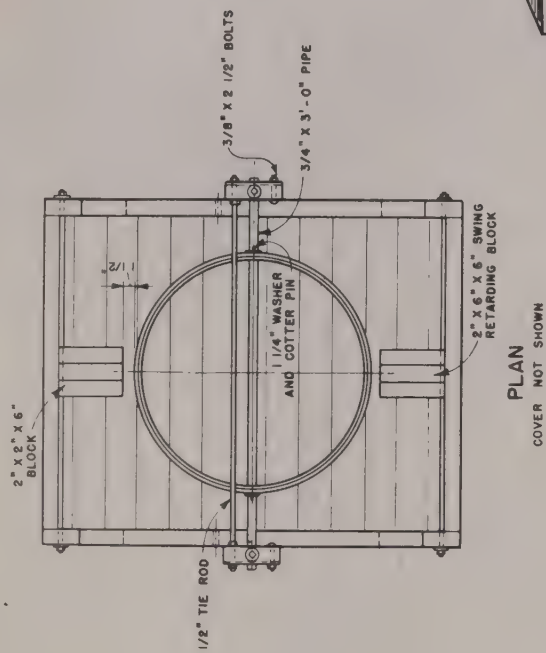
NOTE:
Place feeders back to back for double feeder.



PICTORIAL

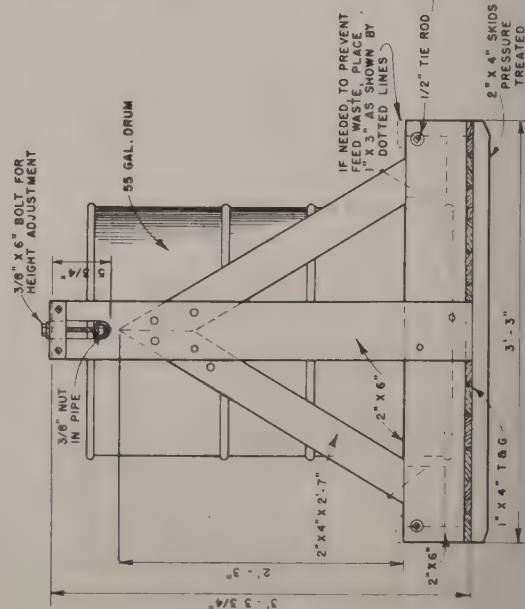


COVER DETAIL
SHOWING FIT

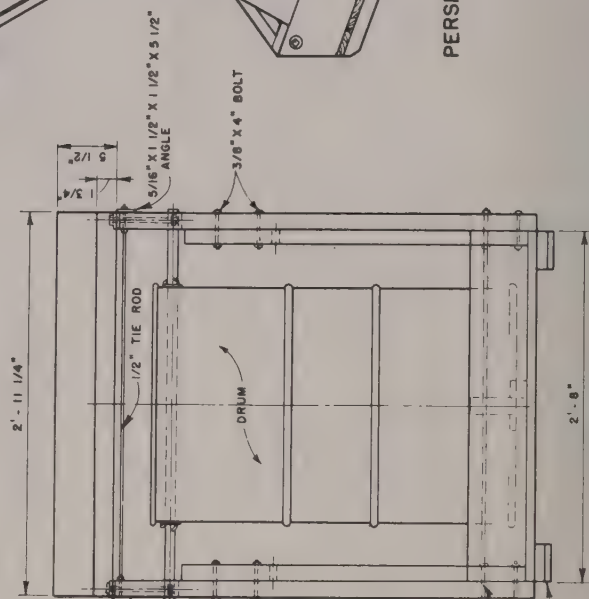


PLAN

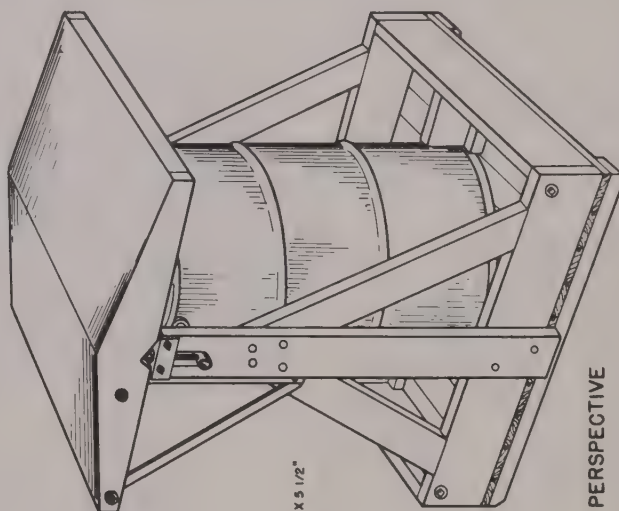
COVER NOT SHOWN



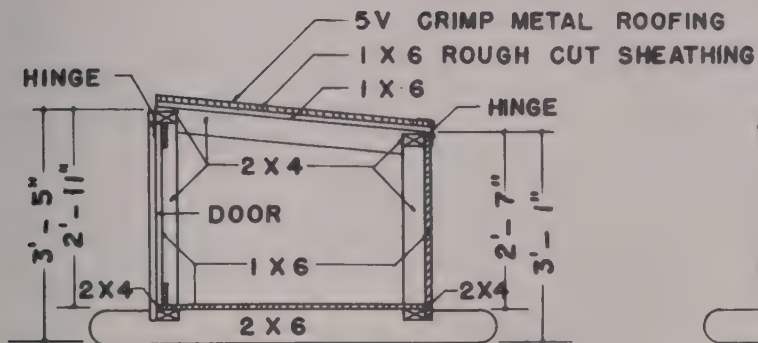
ELEVATION



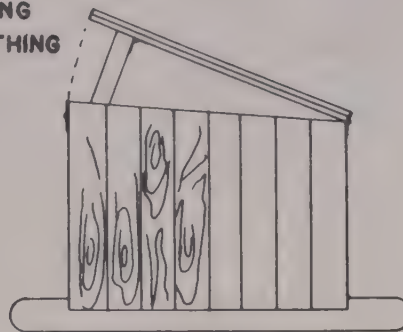
END VIEW



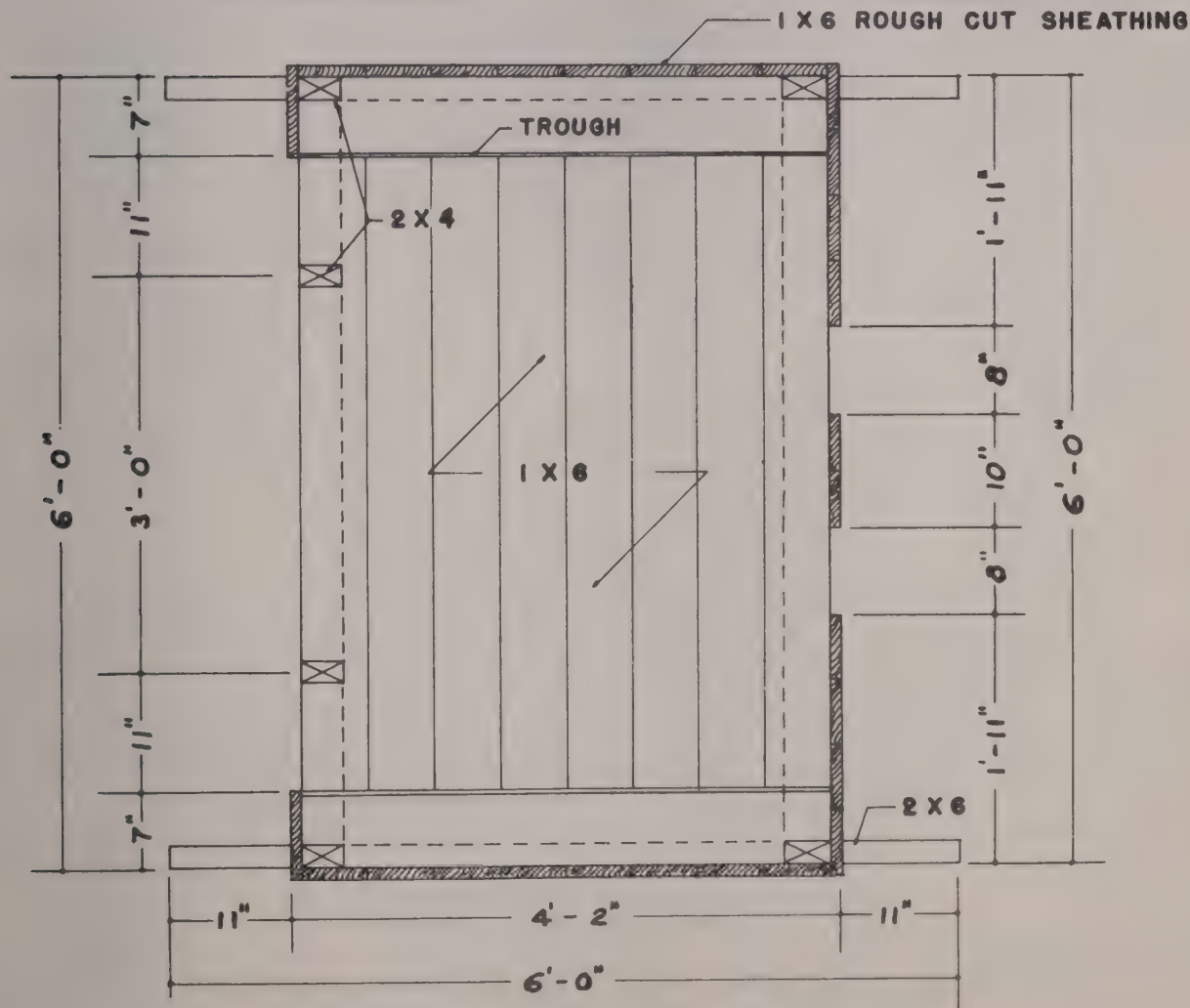
PERSPECTIVE



SECTION A-A



ELEVATION



FLOOR PLAN

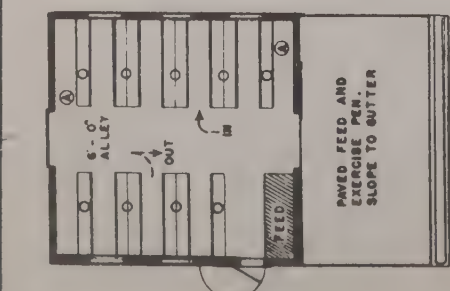
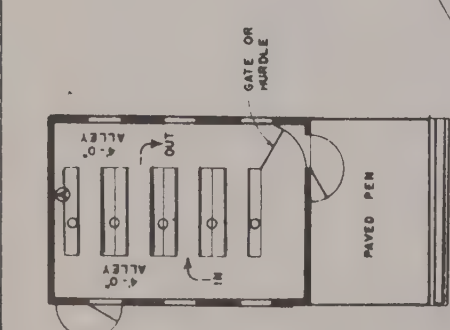
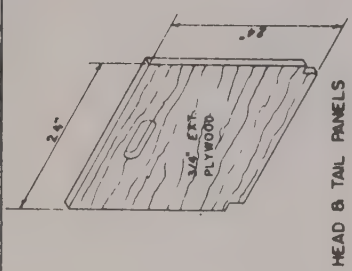
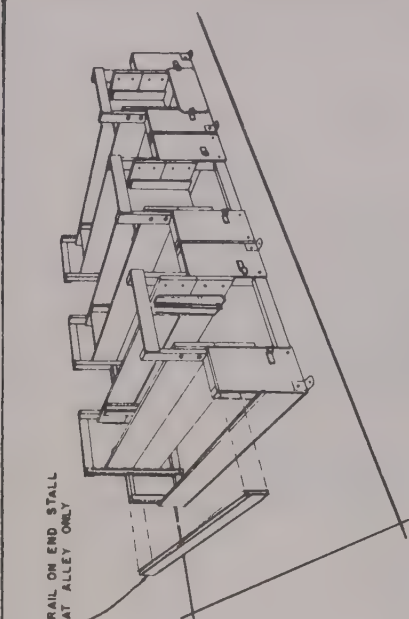
FLORIDA AGRICULTURAL
EXTENSION SERVICE
COLLEGE OF AGRICULTURE
UNIVERSITY OF FLORIDA
AND USDA COOPERATING

PIG CREEP FEEDER

FLA. 514

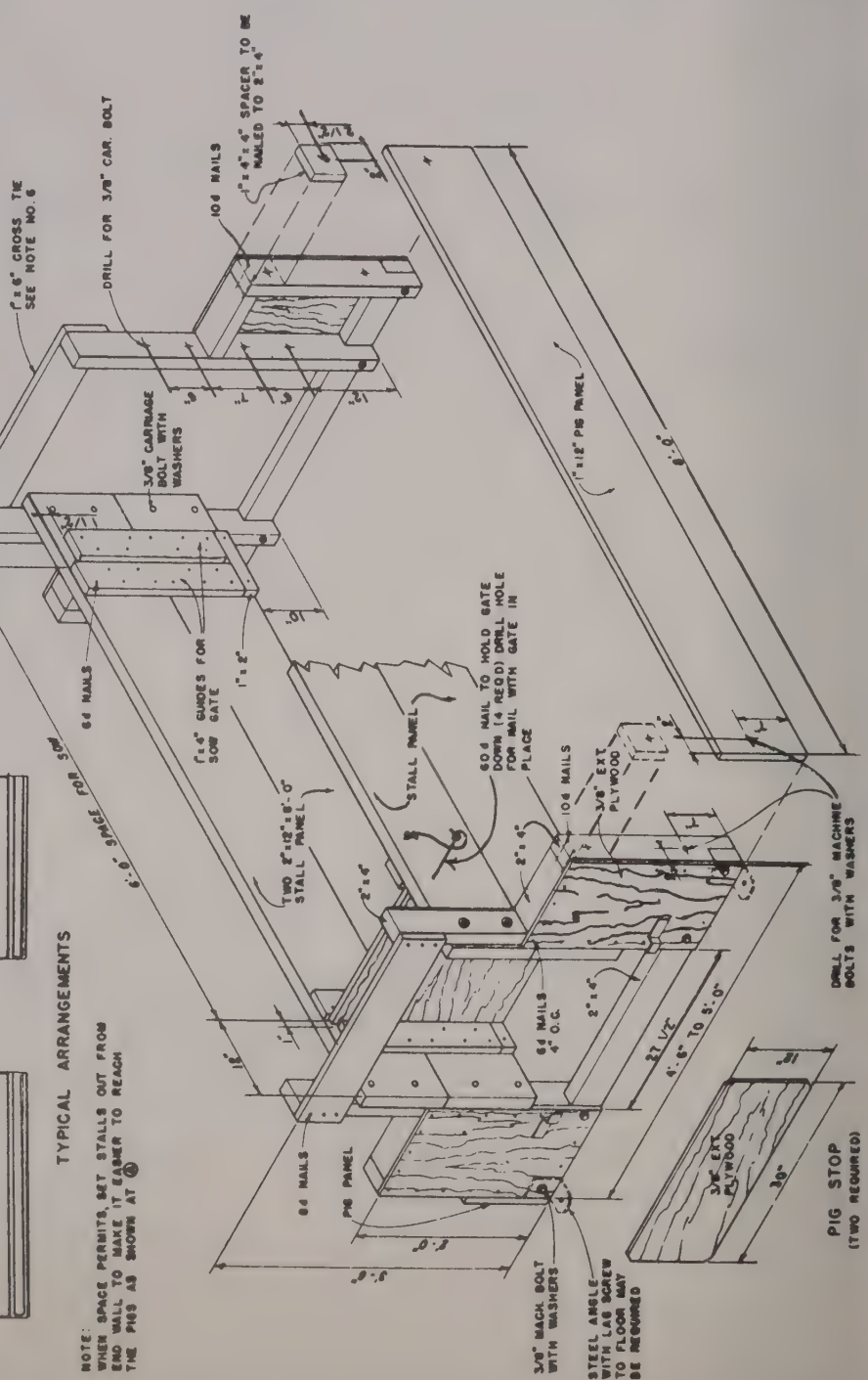
1 OF 1

EXT. AGR. ENGINEER - GAINESVILLE, FLA.



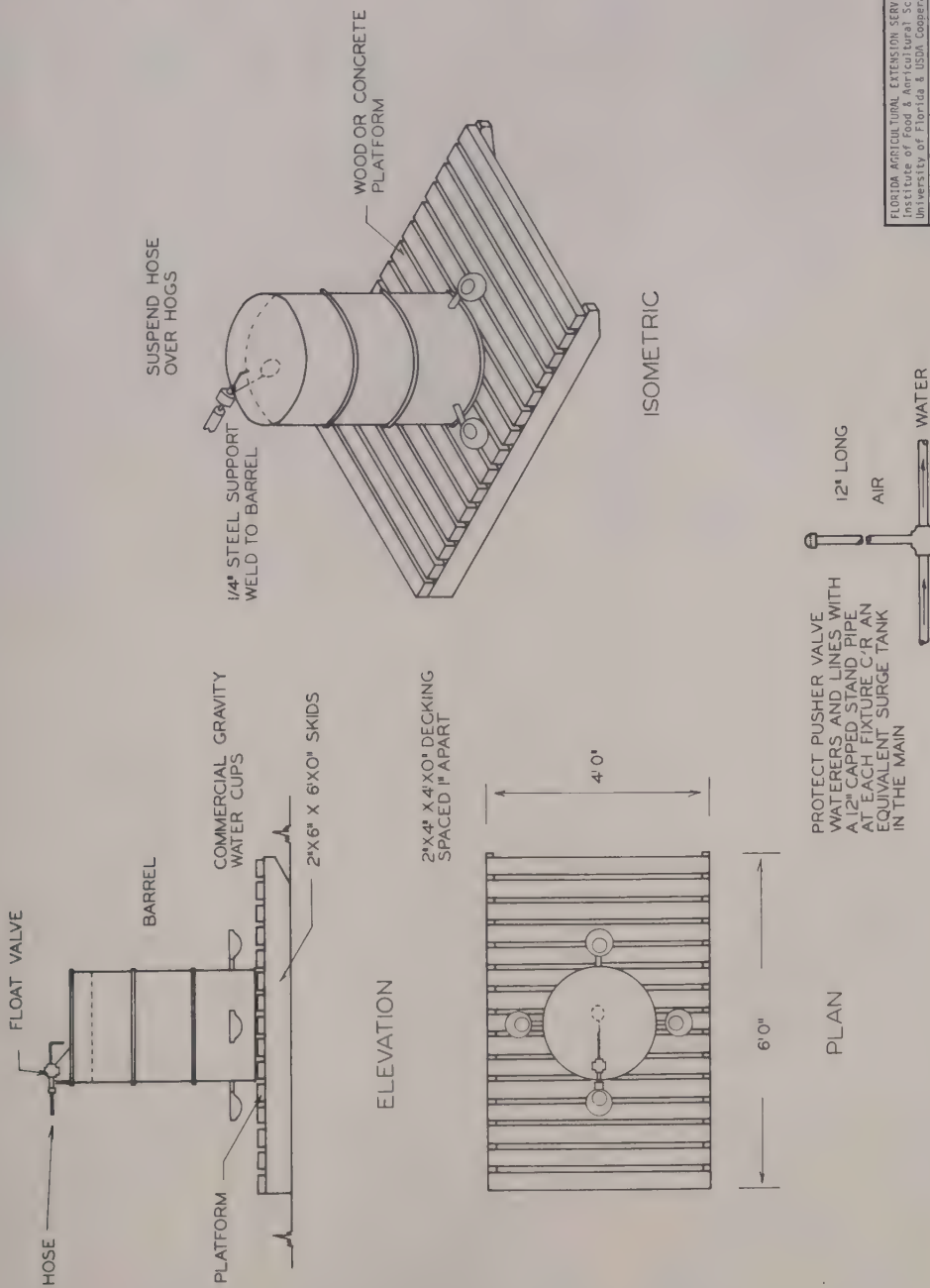
TYPICAL ARRANGEMENTS

NOTE: WHEN SPACE PERMITS, SET STALLS OUT FROM END WALL TO MAKE IT EASIER TO REACH THE PHS AS SHOWN AT ①

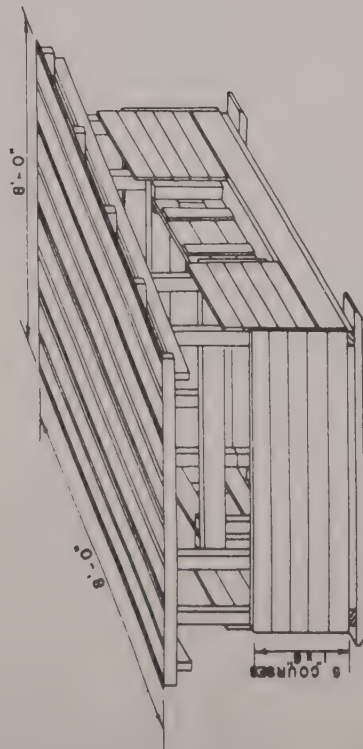


NOTE:

1. 2" x 4" UPRIGHTS AND BASE OF THE END FRAMES SHOULD BE TREATED WITH PRESERVATIVE.
2. STALLS MAY BE SET UP IN ANY SUITABLE BLOCK, A CONCRETE FLOOR IS RECOMMENDED.
3. THE SOW SHOULD BE PLACED IN THE STALL SEVERAL DAYS BEFORE FARROWING SO SHE CAN BECOME ACCUSTOMED TO HER SURROUNDINGS.
4. SOWS ARE TAKEN OUT OF THE STALLS FOR FEED, WATER AND EXERCISE.
5. THESE STALLS MAY BE DISASSEMBLED FOR STORAGE BY UNBOLTING THE STALL DOOR PANELS. DOOR PANELS SHOULD BE CORRECTLY REASSEMBLED AND NUMBER THE PARTS OF EACH STALL.
6. IF THE STALLS ARE TO BE LEFT IN PLACE, THE 2" x 4" UPRIGHTS NEED NOT EXTEND ABOVE THE STALL SIZES AND THE 1" x 6" CROSS TIE WILL NOT BE NEEDED.

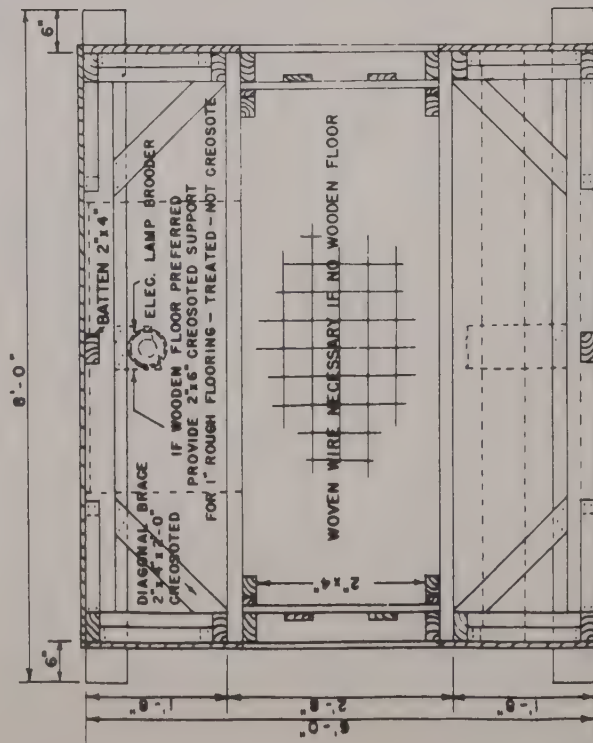


FLORIDA AGRICULTURAL EXTENSION SERVICE Institute of Food & Agricultural Sciences University of Florida & USDA Cooperating			
DRAWN BY A.R.M.		APPROVED BY: T.C.S.	
DATE	6-14-65	REVISED V T B	
BAYBEL WATERER (Not For Freezing Weather)			
Adapted from: Highest Plan Service MPPS-B			DRAWING NUMBER 520



PERSPECTIVE

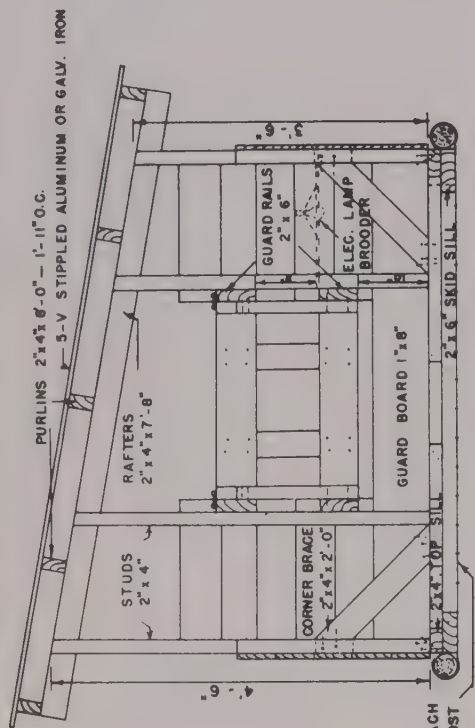
6. 1. WOVEN WIRE FASTENED EACH
END TO 3" D. x 8' CREOSOTED POST



PLAN

MISC.

- Brooder 1-150 W. Elec. Lamp - Wiring To House as Required
- New or Used Hog Wire to Tightly Cover Floor
- 1 lb. Galvanized Wire Staples
- 4 Sets Heavy-Duty Door Hooks and Eyes
- Common Nails - As Required



SECTION DETAIL

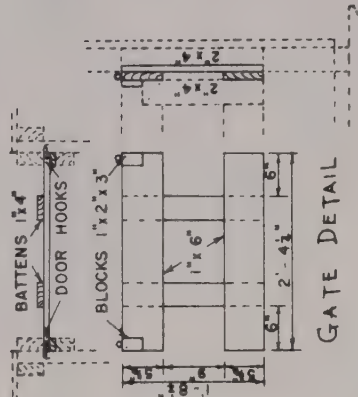
SCALE: 1" = 2'

NOTE: Freshly Treated Lumber is Usually Toxic to Animals. Allow Time For Excess Oil-Base to Evaporate.

OTHER LUMBER, D4S, PENTA.

TREATED

- 2 pcs. 2'x6"x14'-0" Guard Rails
- 9 pcs. 2'x4"x8'-0" Rafters, Purlins and Gate Guides
- 1 pc. 1'x8"x12'-0" Guard Boards
- 5 pcs. 1'x6"x14'-0" Front and Rear Walls
- 5 pcs. 1'x6"x10'-0" End Wall & Gate
- 1 pc. 1'x4"x8'-0" Gate Battens



GATE DETAIL

BILL OF MATERIALS

CREOSOTED LUMBER - UNDRESSED

- 2 pcs. 2'x6"x8'-0" Skid Sills
- 1 pc. 2'x4"x14'-0" Top Sills
- 1 pc. 2'x4"x12'-0" "
- 8 pcs. 2'x4"x8'-0" Studs-Bracing-Battens
- 2 ea. 3" Dia. x 8' Long Posts - Floor-Wire Anchors

ROOF

- 4 pcs. 2'x8', 5-V Stippled Aluminum or Galvanized Iron Roofing
- 2 lbs. 1 3/4" Lead Roofing Nails

INDIVIDUAL HOG BROODER HOUSE	
ANIMAL HUSBANDRY & AGRICULTURAL ENGINEERING COASTAL PLAIN EXPERIMENT STATION	
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING	
Drawn By: J. L. S. Approved By: W. C. Y. - B. L. S. - G. A.	SHEET 1 OF 1

BEAR WALL

BLOCKING

2"x4" GUARD RAIL

1"x8" CLOSURE BOARD

PEN PARTITION

WOOD SCREWS

NOTE: IN THIS TYPE BROODER
USE INCANDESCENT BULBS ONLY

TYPICAL INSTALLATION

CUT HOLE ABOUT 1" SMALLER THAN
METAL REFLECTOR. LOCATE SO THAT
RIM OF REFLECTOR IS NOT LESS THAN
10" FROM BACK CORNER. HOLD
REFLECTOR DOWN WITH SCREWS FOR
EASY REMOVAL TO CHANGE BULBS.
PLACE WIRE GUARD ON UNDERSIDE OF HOLE

2"x4"x2'-2" POST (NOTCHED)

2"x2" POST

3'-6"

BLOCKING

PEN PARTITION

1"x4" BATTENS

2"x4"

1"x6" LUMBER
OR 3/4" PLYWOOD

4'-11 1/2"

SILL

WOOD SCREWS

CONSTRUCTION DETAILS

NO 16 RUBBER JACKETED TYPE
MSJ CORD

PORCELAIN
SWITCHLESS
RECEPTACLE

COMMERCIAL TYPE
REFLECTOR

PLUG

NO 16 RUBBER JACKETED
TYPE MSJ CORD

PORCELAIN RECEPTACLE WITH
COVERED TERMINALS OR PIG TAILS

ALUMINUM PAN USED
AS REFLECTOR

INCANDESCENT LAMP

REFLECTOR LAMP
(INCANDESCENT LAMP)

WIRE LAMP GUARD

LAMP ASSEMBLY (ALTERNATE)

RECOMMENDED INCANDESCENT LIGHT BULB SIZES

MILD WEATHER - 60 WATTS
SEVERE WEATHER - 100 WATTS
VERY SEVERE WEATHER - 150 WATTS

DO NOT USE A LAMP (BULB)
OF MORE THAN 150 WATTS

HOVER TYPE BROODER

TYPICAL INSTALLATION

250 WATT INFRARED LAMP
MINIMUM HEIGHT OF
BULB ABOVE LITTER
BEHIND BARRIER
IS 24" WHEN USED
OVER CENTER OF
PEN 30"

2"x4" POSTS (NOTCHED)

2"x4" RAILS
5'-0" LONG

WALL

CUT OFF POST
TO SUIT SILL

1"x8"x5'-0"

WOOD SCREWS

PEN PARTITION

FASTEN WITH
WOOD SCREWS

PEN PARTITION

CONSTRUCTION DETAILS

VENT HOLES

METAL REFLECTOR HOOD

HARD GLASS LAMP

HALF ROUND GUARD HOOP

REFLECTOR (ALTERNATE)
(INFRARED LAMP)

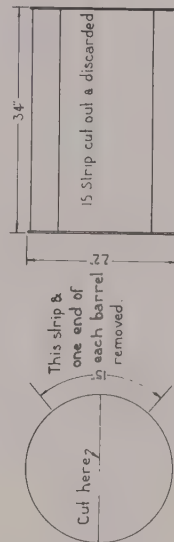
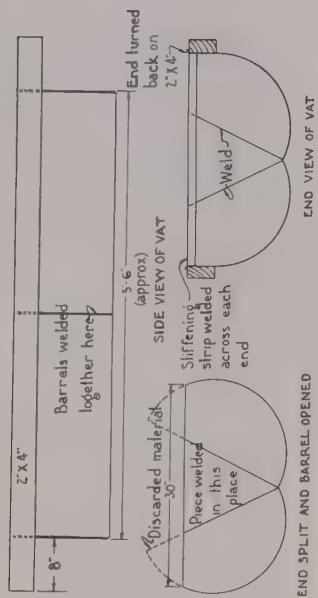
PEN TYPE BROODER

GENERAL HOG HOUSE WIRING RECOMMENDATIONS

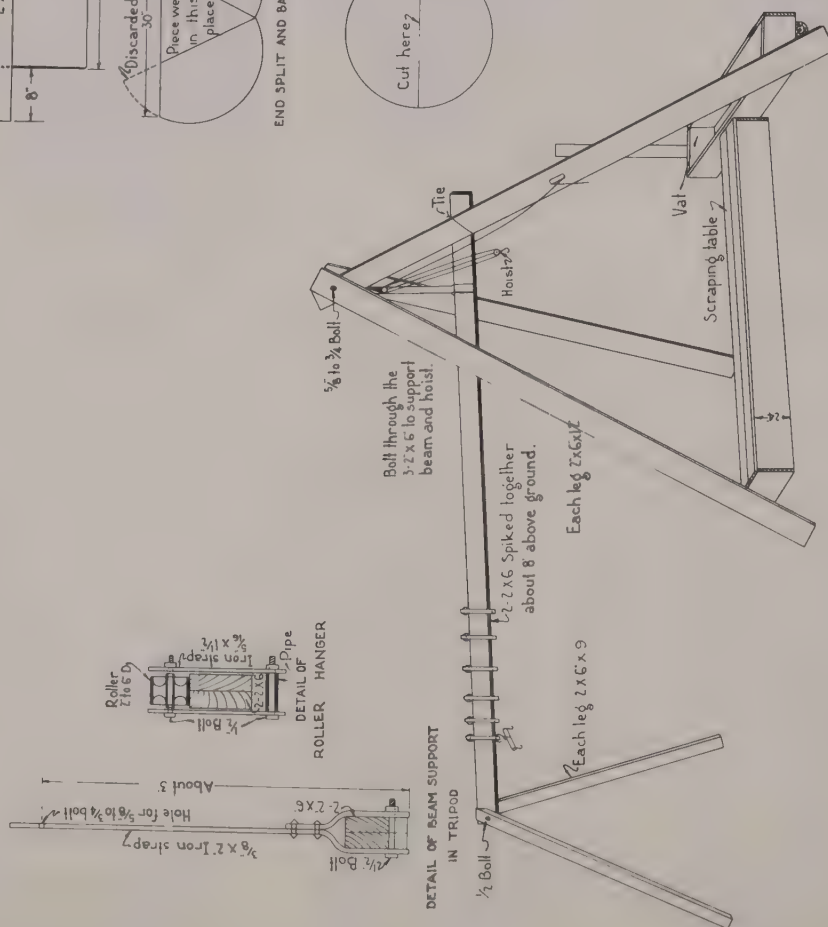
1. NUMBER 12 AWG. TYPE UF, NON-METALLIC SHEATHED CABLE
2. DO NOT USE MORE THAN SIX 250 WATT LAMPS OR TEN 150 WATT LAMPS PER 20 AMPERE CIRCUIT
3. PERMANENT AND MOVABLE BUILDINGS MUST HAVE PROPERLY FUSED SERVICE ENTRANCE BOXES
4. THESE RECOMMENDATIONS ARE SUBJECT TO LOCAL REGULATIONS.

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
STATE OF GEORGIA
UNIVERSITY OF GEORGIA COLLEGE OF AGRICULTURE
AND
FORESTRY
UNIVERSITY OF GEORGIA DEPARTMENT OF AGRICULTURE, COOPERATING

ELECTRIC PIG BROODERS
USDA '54 EX. 5788 SHEET 1 OF 1



HOG SCALDING VAT
(made from two oil barrels)



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

THE TEXAS A. & M. COLLEGE SYSTEM AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING
G. G. GIBSON, DIRECTOR, COLLEGE STATION, TEXAS

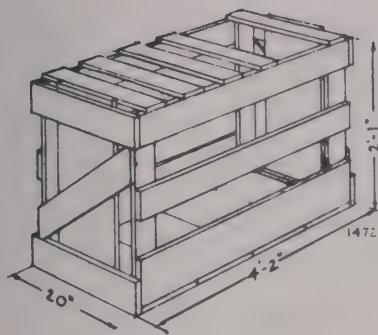
HOG DRESSING EQUIPMENT

DRAWN BY: M.R.B.

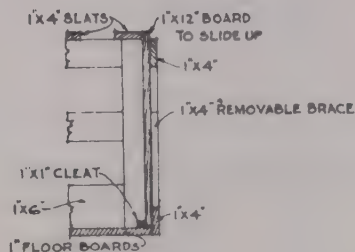
TRACED BY: D.A.J.K.

SHEET 1 OF 1

REVISED JAN 1964 SERIAL NO 176



CRATE FOR 150-175 LB HOG.



BILL OF MATERIALS

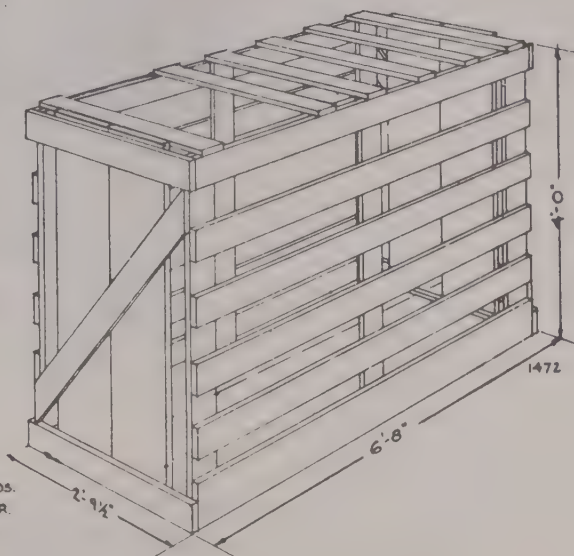
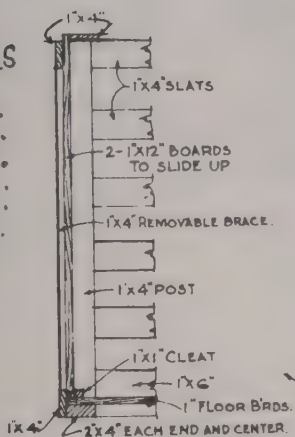
- 1 - 1" x 12" x 12'
- 1 - 1" x 6" x 8'
- 2 - 1" x 4" x 12'
- 2 - 1" x 4" x 10'

1/2 LB. 8d NAILS

BILL OF MATERIALS

- 11 - 1" x 4" - 10'
- 2 - 1" x 4" - 12'
- 1 - 1" x 6" - 14'
- 1 - 2" x 4" - 10'
- 1 - 1" x 10" - 14'
- 3 - 1" x 12" - 8'

1 LB. 8d NAILS

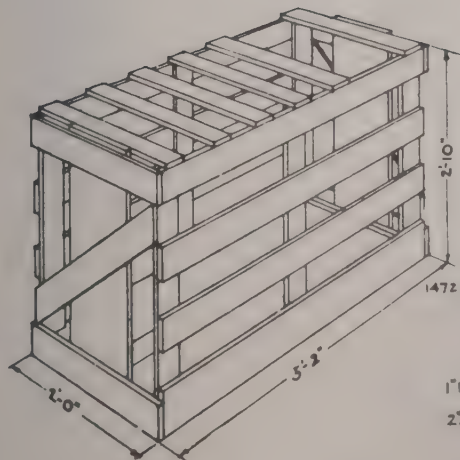


CRATE FOR 500 LB. HOG

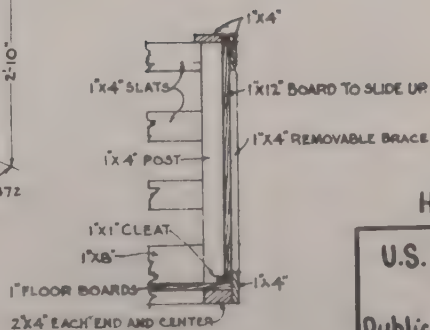
BILL OF MATERIALS

- 8 - 1" x 4" x 10'
- 1 - 1" x 6" - 10'
- 1 - 1" x 12" - 6'
- 1 - 1" x 12" - 10'
- 1 - 2" x 4" - 6'

3/4 LB. 8d NAILS



CRATE FOR 250 LB. HOG



PREPARED FROM DATA
SUBMITTED BY
DIV. OF ANIMAL HUSBANDRY B.A.U.

HOG EQUIPMENT

U.S. Dept. of Agriculture
Office of
Public Roads - Rural Engineering
Division of Rural Engineering
SHIPPING CRATES

UNFOLDED, PAPER TWINE IN PLACE
FLEECE FLESH SIDE DOWN
CLEAN TAGS & LOOSE ENDS

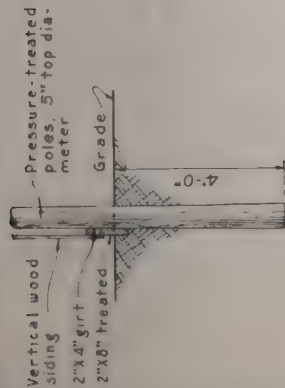
2. RAISE & HOLD SIDES

(3. RAISE ENDS, CLOSING
LOCKING THE BOX T

WEDGE CUT FROM 2" x 6" STOCK

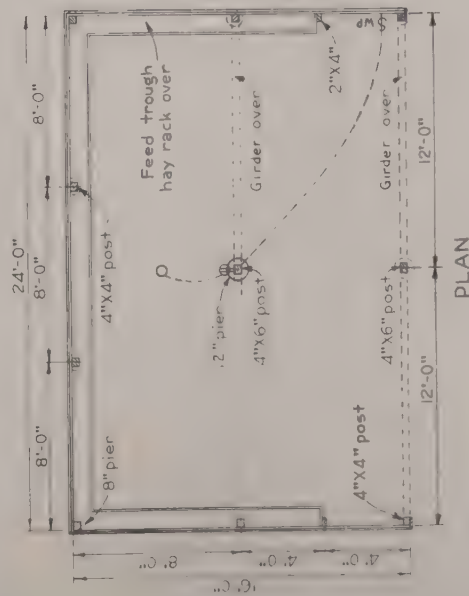
- 1st & 2nd SLAT

STALL DETAIL

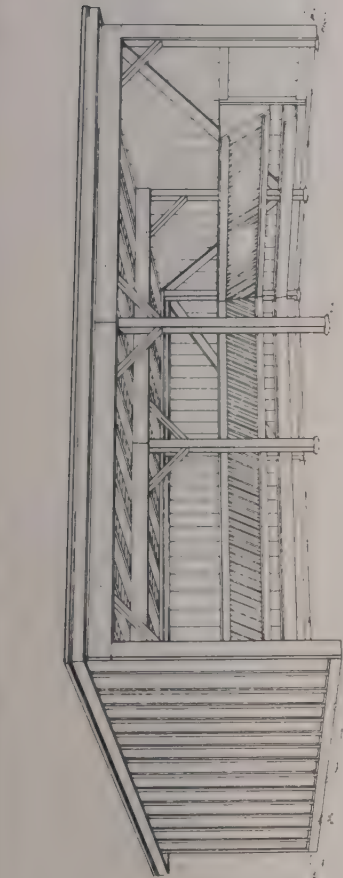


LOWER REAR WALL DETAIL
ALTERNATE
POLE CONSTRUCTION

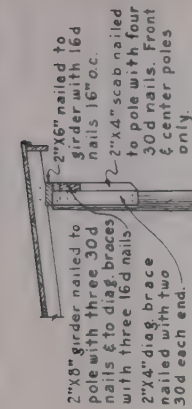
NOTE: Provide 12" diameter concrete pad 6" thick under center pole.



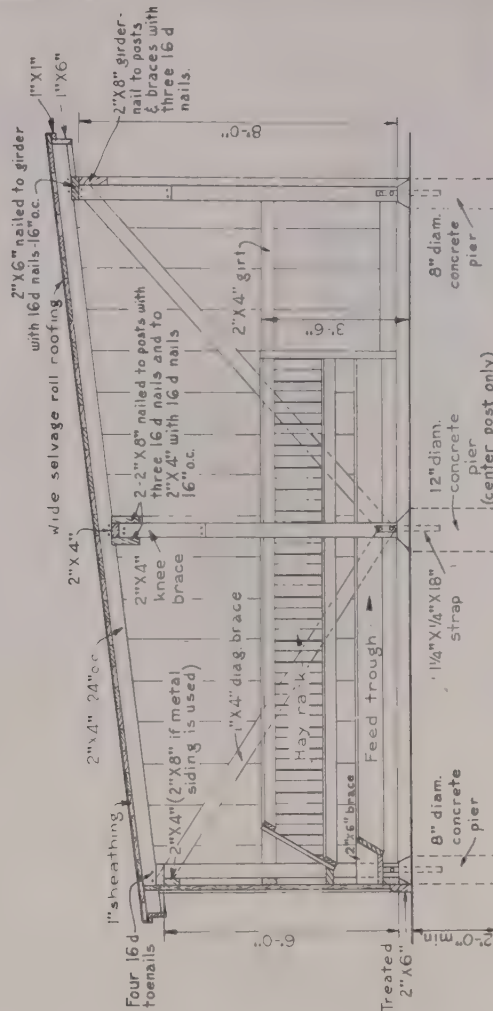
PLAN



PERSPECTIVE



EAVE DETAIL
ALTERNATE
POLE CONSTRUCTION



CROSS SECTION

Note: Corrugated metal siding may be used instead of wood if 2x8" girder is substituted for 2x4" in rear wall & one additional 2x4" girder is installed in each end wall about 6'-2" above ground.

BILL OF MATERIALS

CONCRETE MIX 1:3:5

3 sacks cement 1/2 cu yd. sand 1/2 cu yd. gravel

LUMBER

1-4"x4"x12'-0" 6-2"x6"x12'-0" 13-1"x12"x12'-0"
3-4"x4"x12'-0" 5-2"x6"x16'-0" 17-1"x12"x14'-0"
1-4"x6"x16'-0" 2-2"x6"x18'-0" 8-1"x8"x12'-0"
2-2"x8"x8'-0" 11-2"x4"x8'-0" 4-1"x6"x14'-0"
6-2"x8"x12'-0" 11-2"x4"x16'-0" 2-1"x6"x18'-0"
4-2"x6"x8'-0" 13-2"x4"x18'-0" 6-1"x4"x12'-0"
700-lin ft 1"x3" 570-ft BM sheathing 90-lin ft 1"x1"

MISCELLANEOUS

5-squares roofing 20-1/2" x 5" bolts
20-1 1/4"x1/4"x18" straps 10-lbs. 16d nails.
5-lbs 6d nails 25-lbs. 8d nails

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

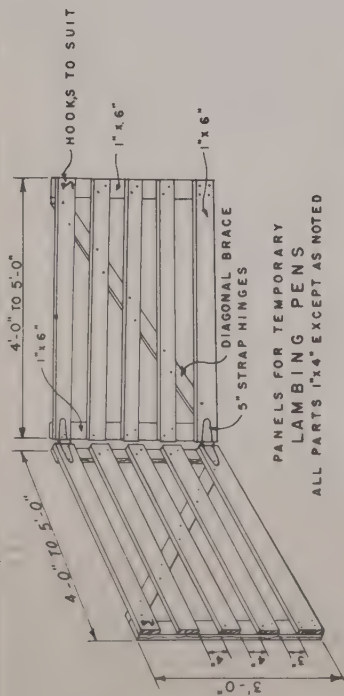
SHEEP SHED

USDA

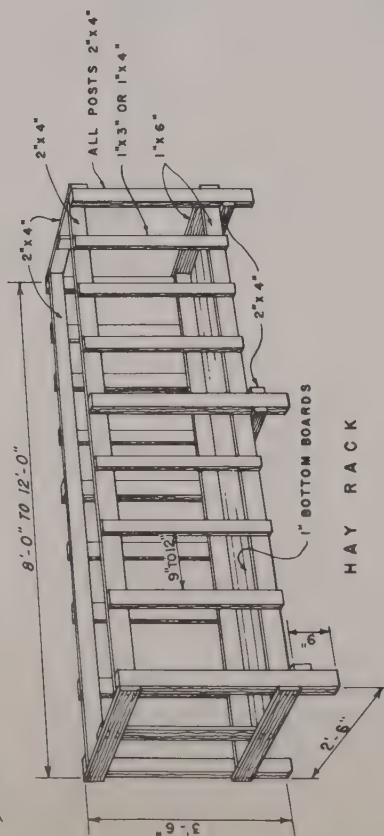
EX. 5025

SHEET 1 OF 1

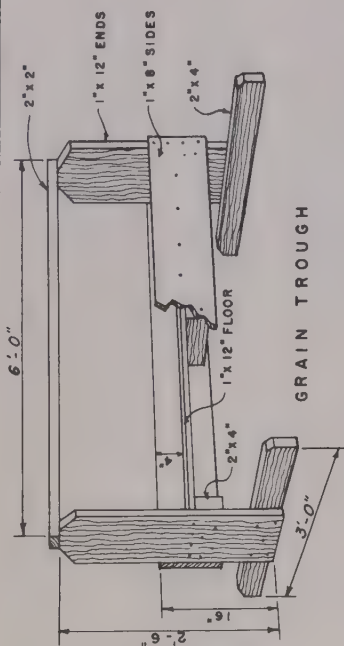
REVISED 1955



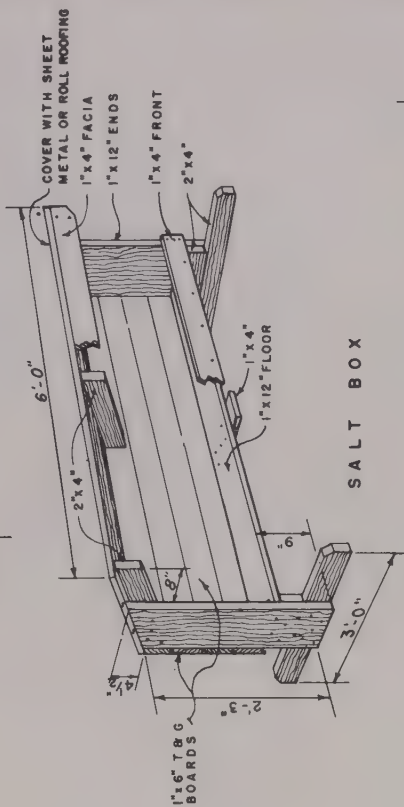
PANELS FOR TEMPORARY
LAMBING PENS
ALL PARTS 1"x4" EXCEPT AS NOTED



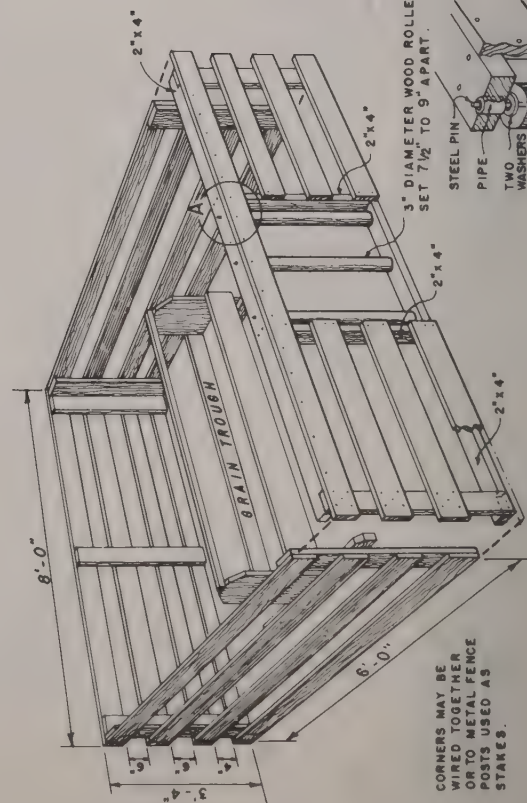
HAY RACK



GRAIN TROUGH

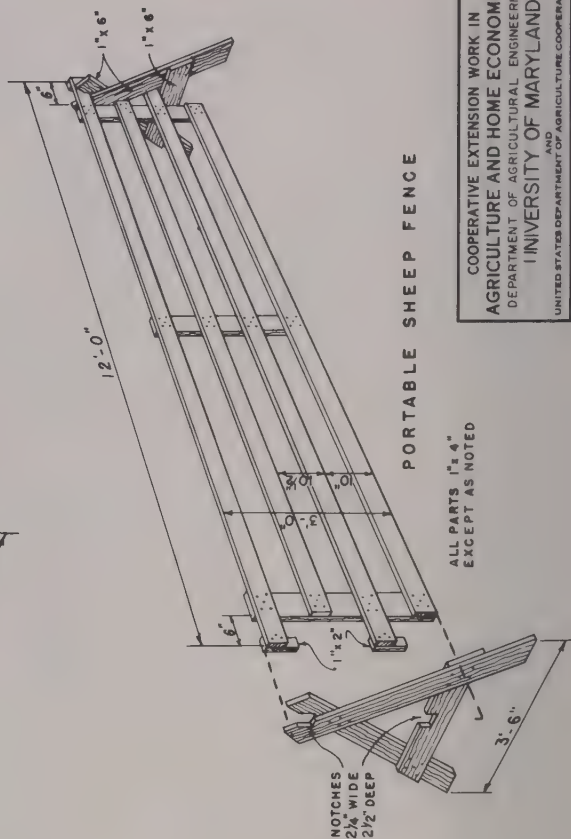


SALT BOX



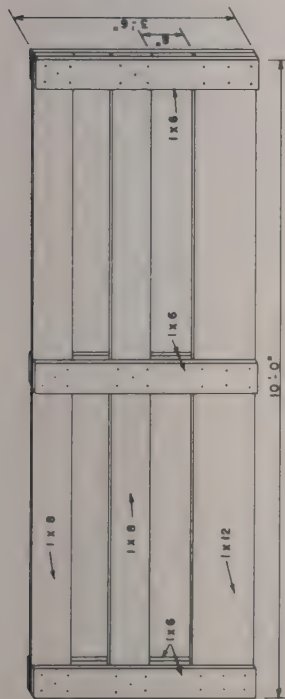
CORNERS MAY BE
WIRED TOGETHER
ON TO METAL FENCE
POSTS USED AS
STAKES.

LAMB CREEP
ALL PARTS 1"x6" EXCEPT AS NOTED

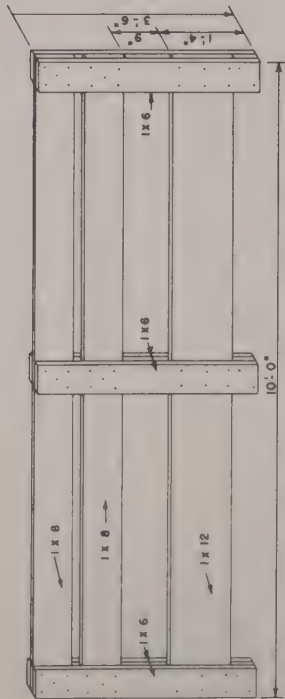


PORTABLE SHEEP FENCE

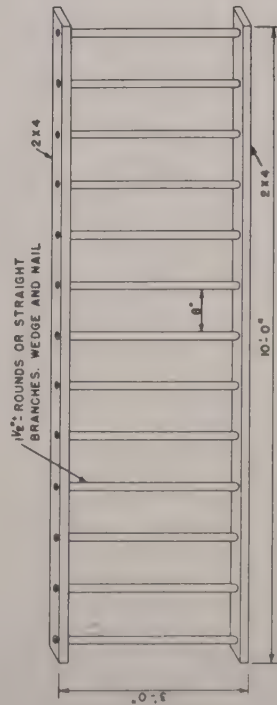
ALL PARTS 1"x4"
EXCEPT AS NOTED



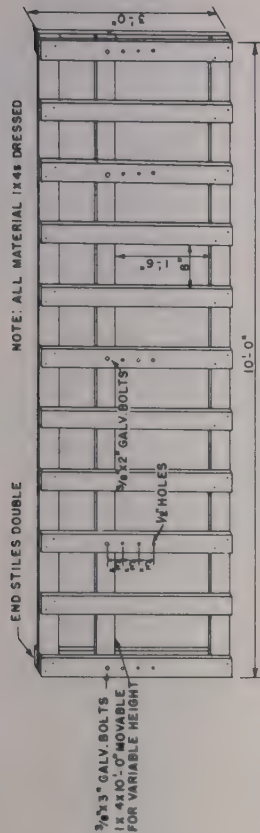
PANEL FOR LAMBS
NOTE: MAY BE USED FOR FENCING A LOT
AND AS A FEED RACK



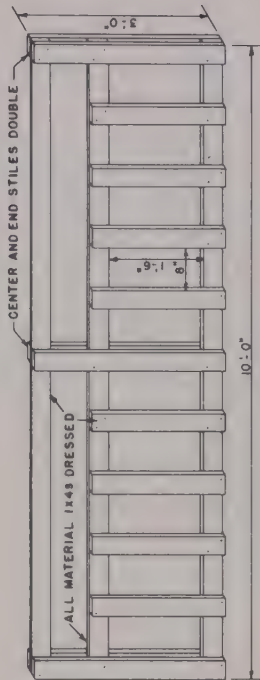
PANEL FOR EWES



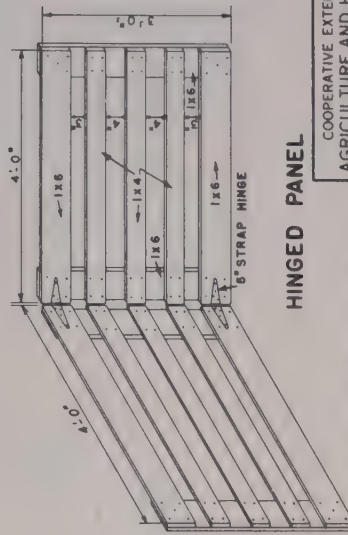
CREEP PANEL



PANEL FOR CREEP FEEDING



PANEL FOR CREEP FEEDING



HINGED PANEL

NOTE: FOR TEMPORARY LAMBING
OR CLAIMING PENS

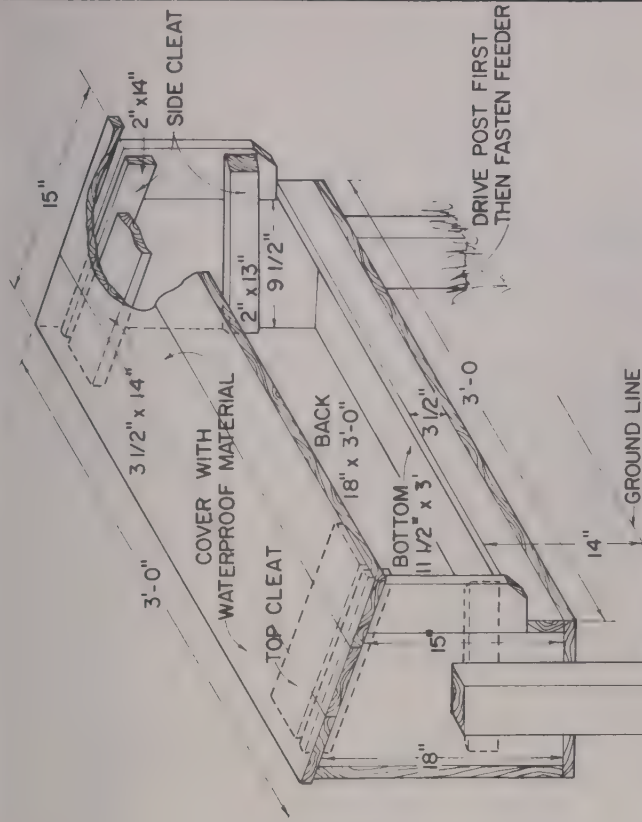
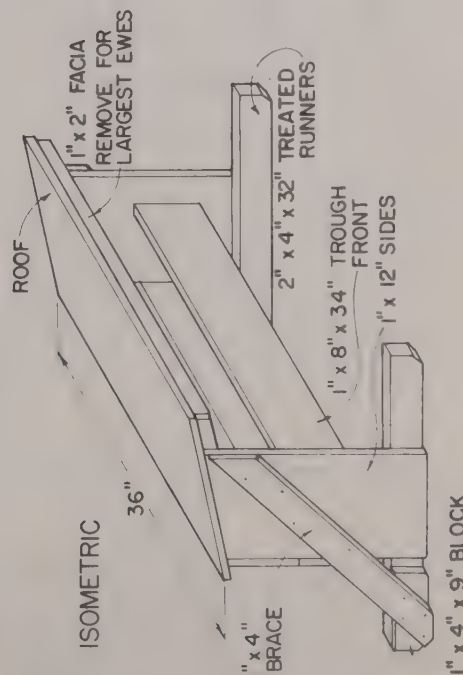
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**FENCING AND FEEDING PANELS
FOR SHEEP**

USDA '60 EX. 5917 SHEET 1 OF 1

0 1 2 FT. USED THRU-OUT.

2 pcs.	2" x 4" x 32"	RUNNERS, TREATED
2 "	1" x 12" x 26"	SIDES
2 "	1" x 8" x 36"	BACK
2 "	1" x 6" x 36"	TOP BOARDS
3 "	1" x 4" x 36"	BRACES
2 "	1" x 4" x 9"	BLOCKS
2 "	1" x 2" x 14"	ROOF CLEATS
2 "	1" x 8" x 34"	TROUGH, FLR. & FR.
2 "	1" x 2" x 34"	TROUGH FLR. FRAM.
2 "	1" x 2" x 6"	"
1 pc.	1" x 2" x 34"	FACIA BOARD
1 "	18" x 36"	ASBESTOS BOARD
		OR METAL ROOFING

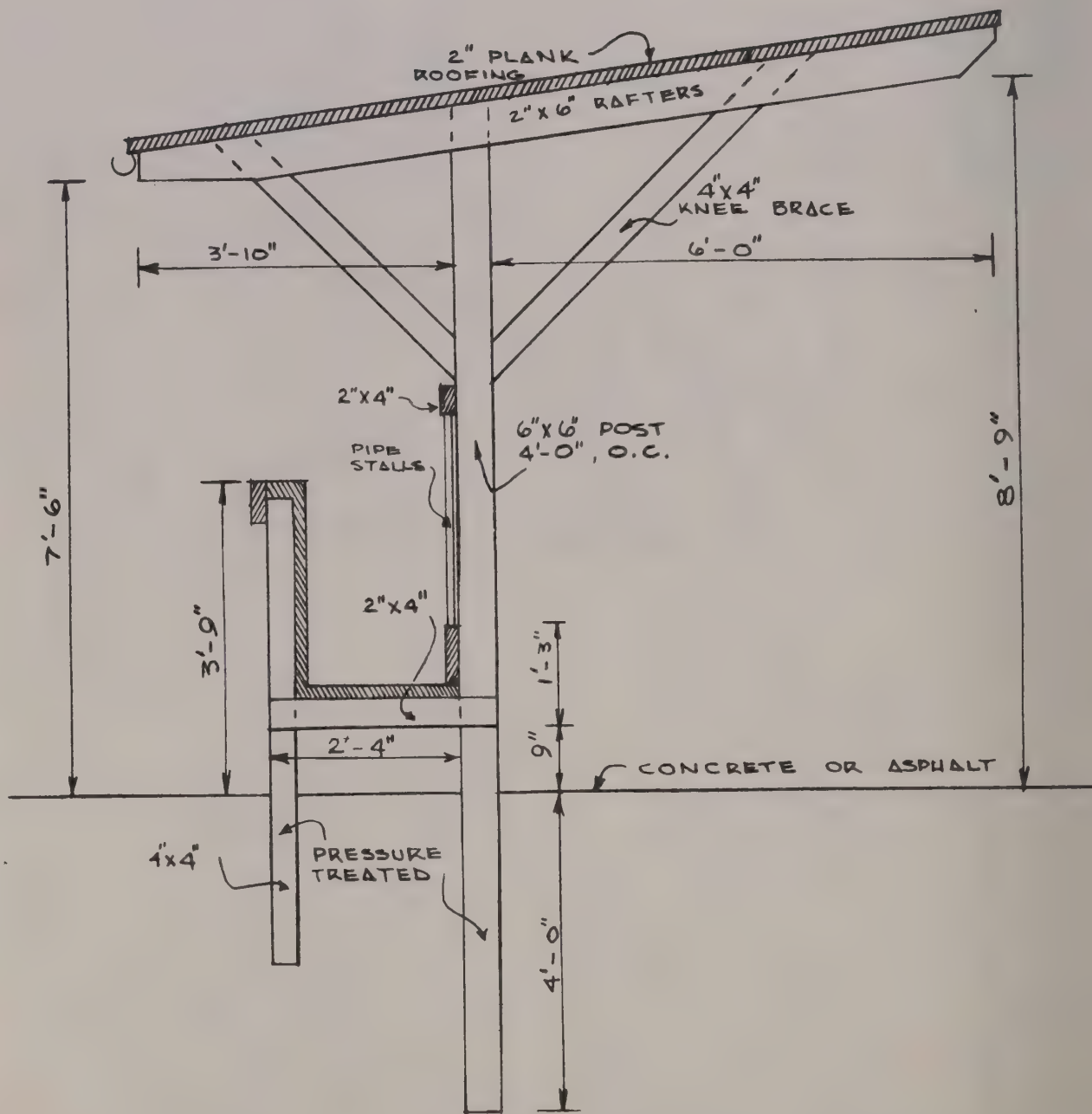


1 pc. 2" x 4" x 6' SUPPORTING POSTS
 " 1" x 12" x 3' BOTTOM
 " 1" x 10" x 3' ENDS
 2 pcs. 1" x 6" x 10' BACK & TOP
 " 2" x 8' SIDE CLEATS & BACK
 " 1" x 4" x 8' FRONT, TOP CLEATS
 " 18" x 3'-4" ROOFING MATERIALS
 1b. 6d Common or 8d BOX NAILS

MICHIGAN STATE UNIVERSITY
COOPERATIVE EXTENSION SERVICE
AGRICULTURAL ENGINEERING DEPT. - EAST LANSING

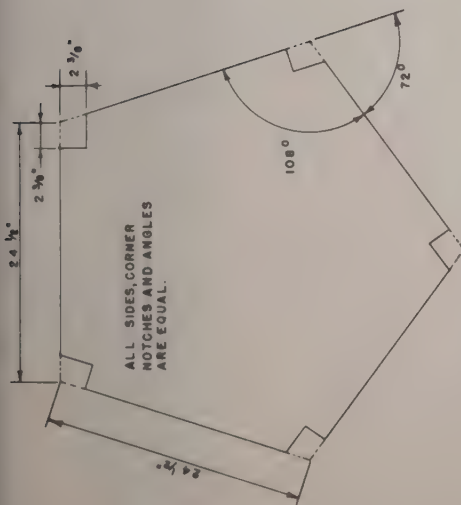
MINERAL FEEDER FOR SHEEP

PLANNED	APPR.	SCALE
DRAWN	DATE	SHEET OF
TRACED	NO.	
CHECKED		

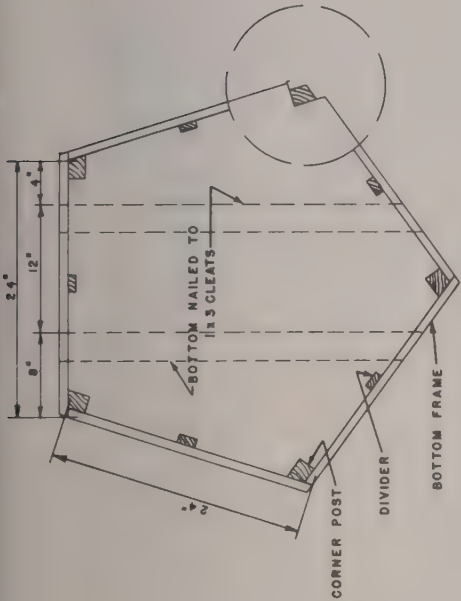


BUNK FEEDER
SINGLE POST - ONE PITCH

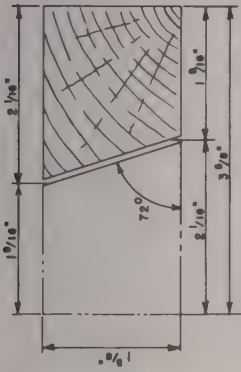
219



BOTTOM PANEL
1/4" TEMPERED HARDBOARD OR
3/8" EXTERIOR GRADE PLYWOOD



PLAN VIEW
TO SHOW ASSEMBLY



CORNER POST DETAIL
RIP FROM DRESSED 2x4

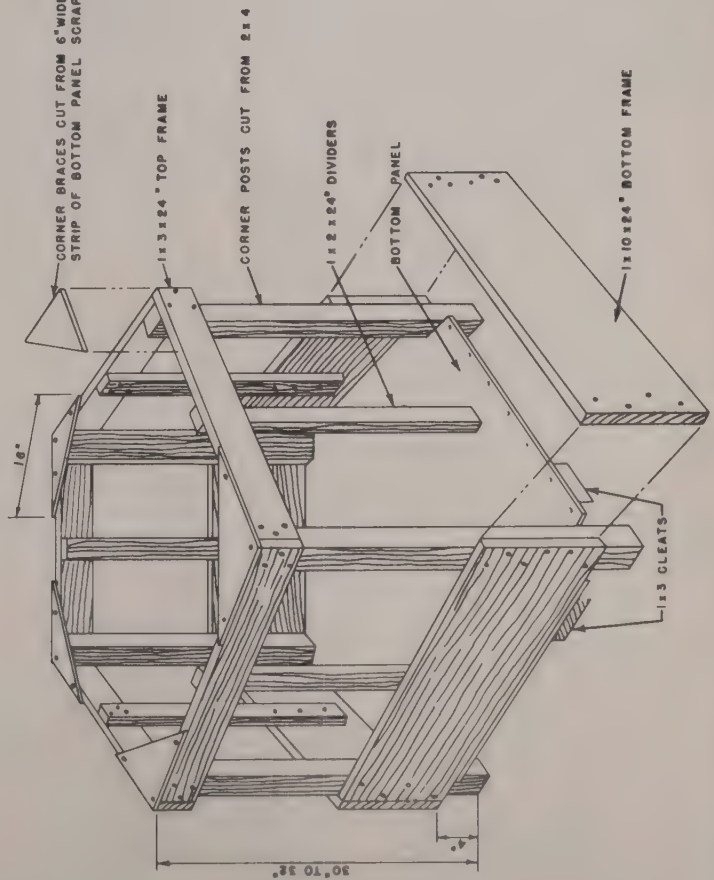


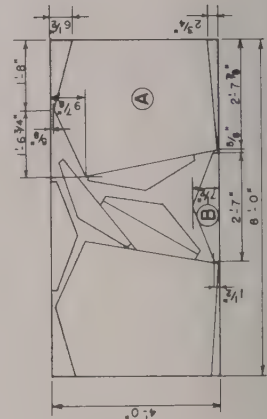
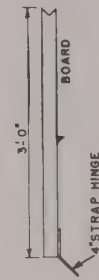
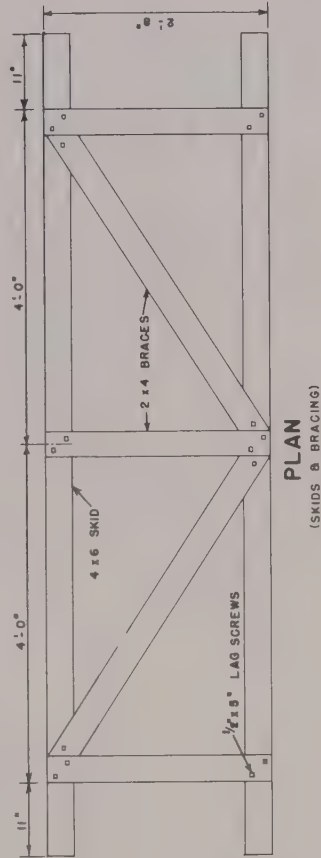
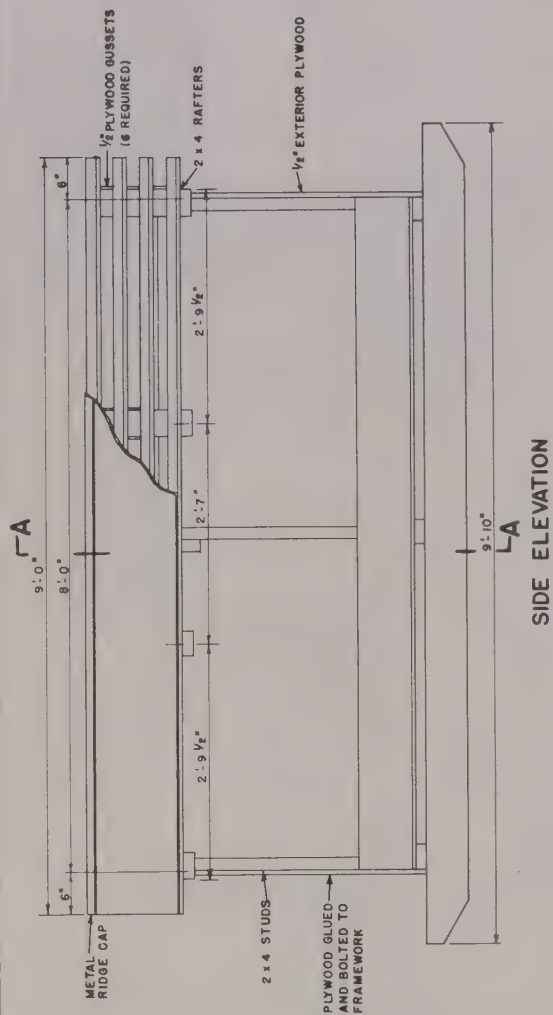
FRAME BOARD DETAIL
SHOWING BEVEL END-CUT

LIST OF MATERIALS

CORNER POSTS	ONE	2x4x8'-0"
BOTTOM FRAME	ONE	1x10x8'-0"
TOP FRAME AND	ONE	1x10x8'-0"
BOTTOM GLEATS	ONE	1x3x14'-0"
DIVIDERS	ONE	1x2x10'-0"
BOTTOM PANEL AND	ONE	40"x48"
CORNER BRACES	ONE	40"x48"
NAILS (RING OR SCREW SHANK)	ONE	40"x48"
BOX GALV.	ONE	1 1/2"

NOTES:
FOR SMALL EWES OR LAMBS
SUBSTITUTE 1x6 DIVIDERS
AND 1x8 BOTTOM FRAME
BOARDS.
TREAT WOOD PARTS WITH
COPPER NAPHTHAMATE OR
PENTACHLOROPHENOL.

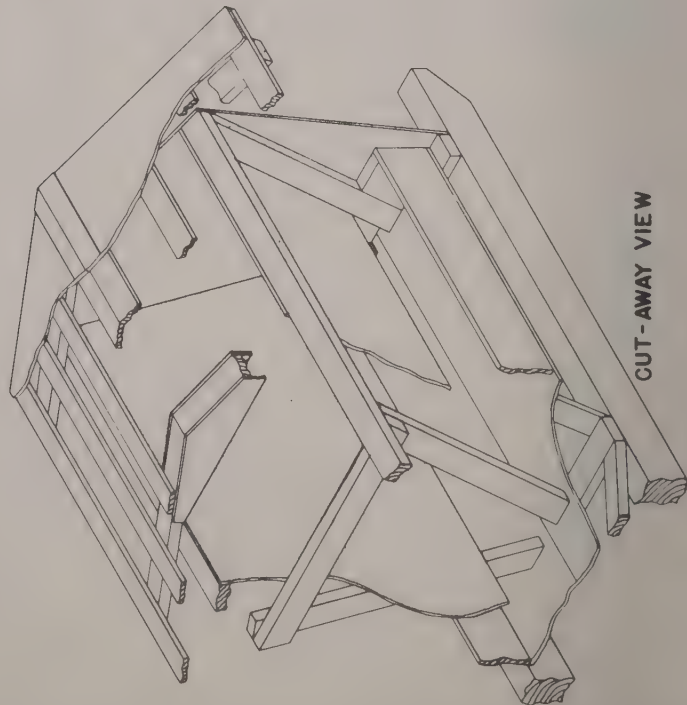
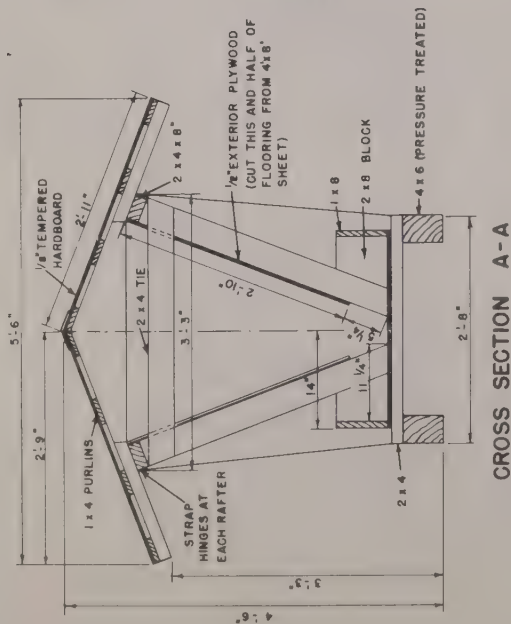




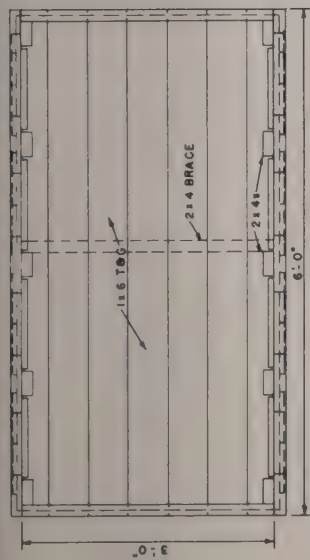
NOTE: NON-CORROSIVE FASTENINGS
SHOULD BE USED THRU-OUT.

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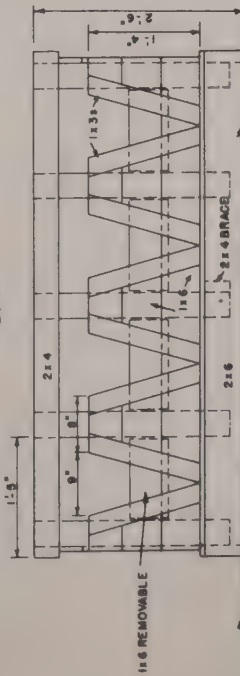
PORTABLE SELF-FEEDER
FOR SHEEP
CAL '60 EX. 5914 SHEET 1 OF 1



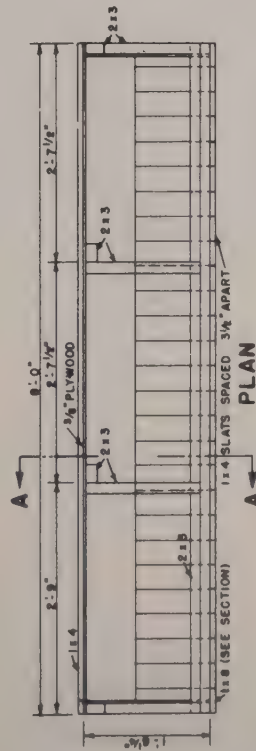
NOTE
CUT 1/2" EXTERIOR GRADE PLYWOOD
AS SHOWN ON DIAGRAM ABOVE.
ALL WOOD SHOULD BE TREATED
WITH A NON-TOXIC PRESERVATIVE.



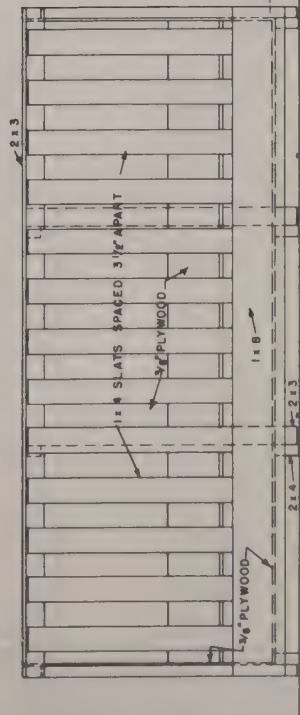
PLAN



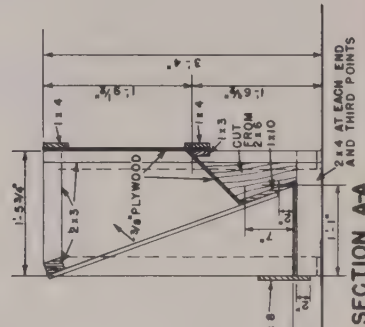
ELEVATION



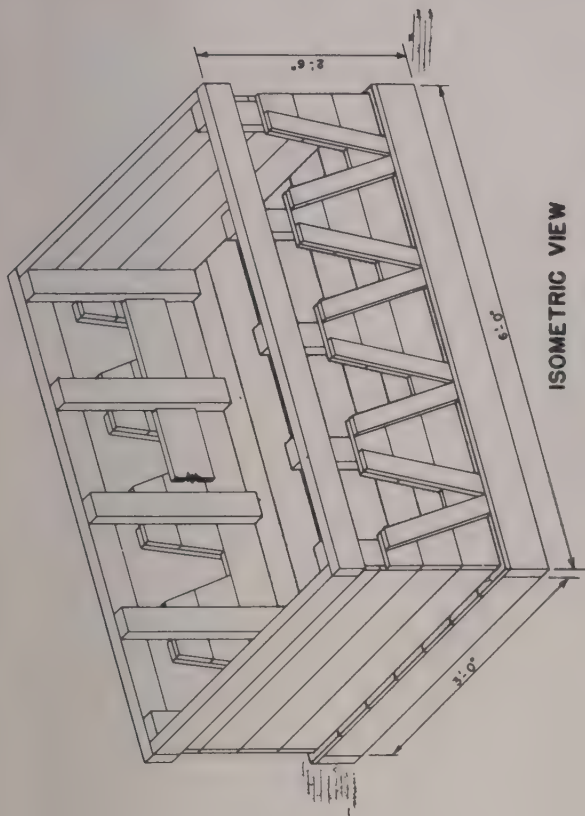
PLAN



ELEVATION



SECTION A-A



ISOMETRIC VIEW

NOTE:
NON-CORROSIVE FASTENINGS SHOULD
BE USED THROUGHOUT BE TREATED
WITH A NON-TOXIC PRESERVATIVE.

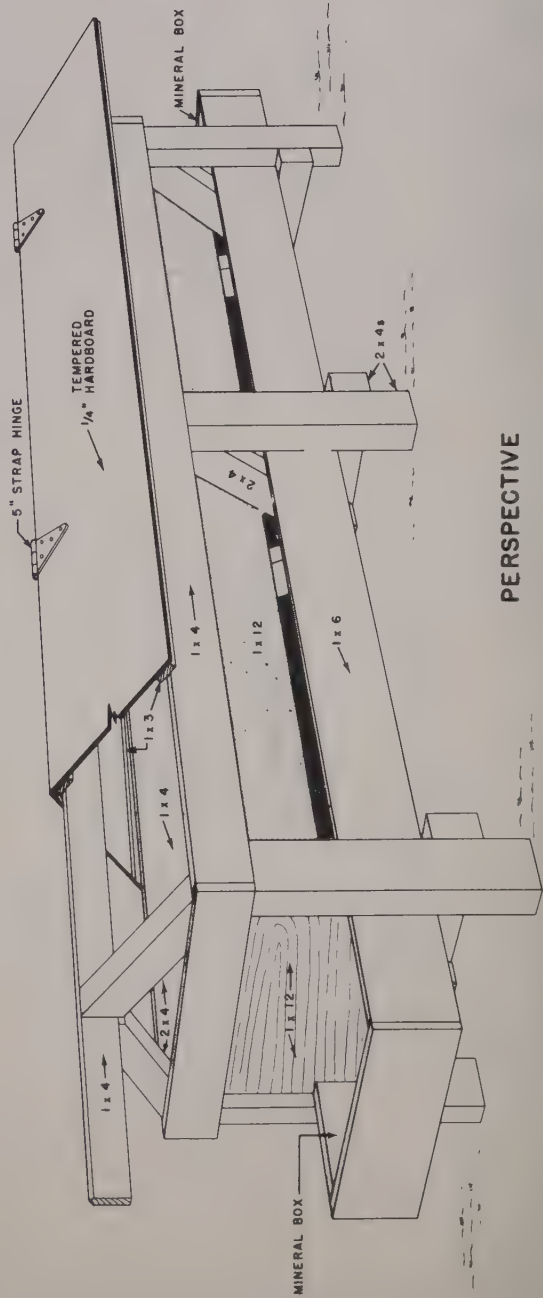
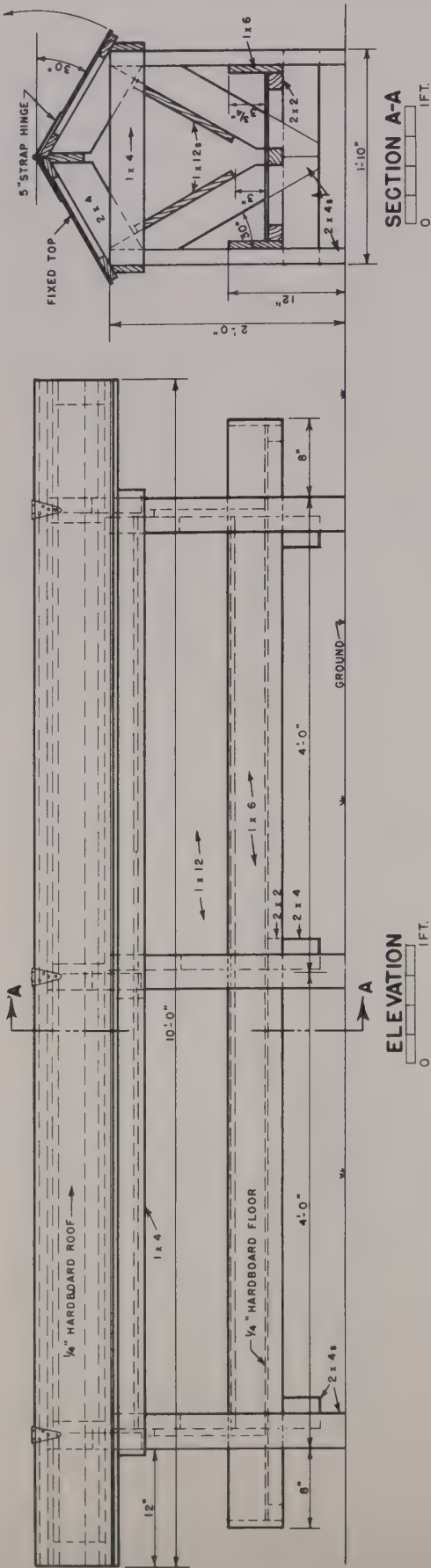


UNLESS OTHERWISE NOTED.

COOPERATIVE EXTENSION WORK IN
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UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

SHEEP FEEDERS

USDA '60 EX. 5913 SHEET 1 OF 1



PERSPECTIVE

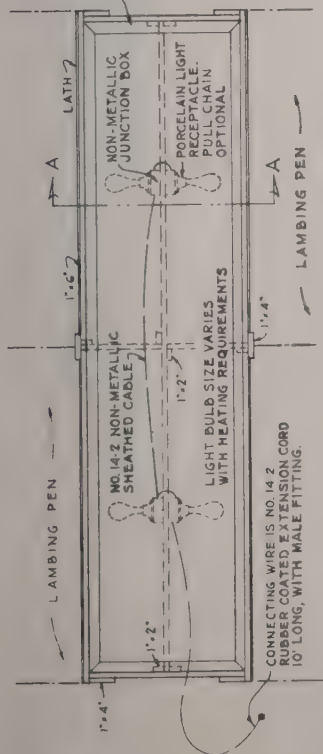
NOTE:
NON-CORROSIVE FASTENINGS SHOULD
BE USED THRU-OUT
ALL WOOD SHOULD BE TREATED
WITH A NON-TOXIC PRESERVATIVE.

BASED ON UTAH PLAN NO.3-003

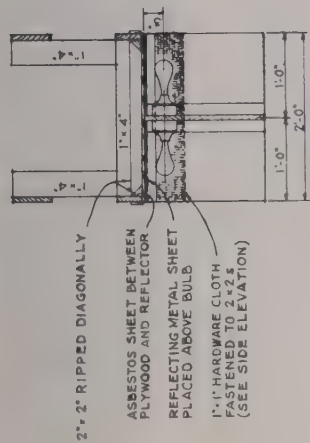
COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

LAMB FEEDER

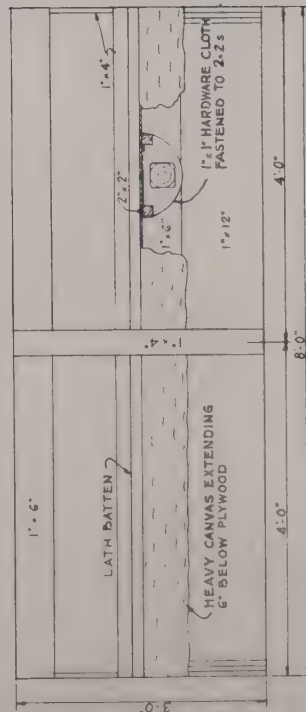
USDA '60 EX 5915 SHEET 1 OF 1



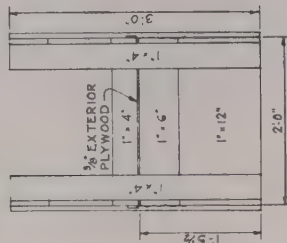
PLAN



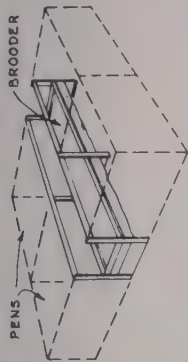
SECTION A-A



SIDE ELEVATION



END ELEVATION



DIAGRAMMATIC LAYOUT
OF BROODER AND PENS

BILL OF MATERIALS

LUMBER:
1'-4" x 12'-0" 1 PC.
1'-4" x 10'-0" 4 PCS.
1'-6" x 10'-0" 3 PCS.
1'-12" x 14'-0" 1 PC.
2'-2" x 8'-0" 1 PC.
2'-2" x 10'-0" 1 PC.

MISCELLANEOUS:

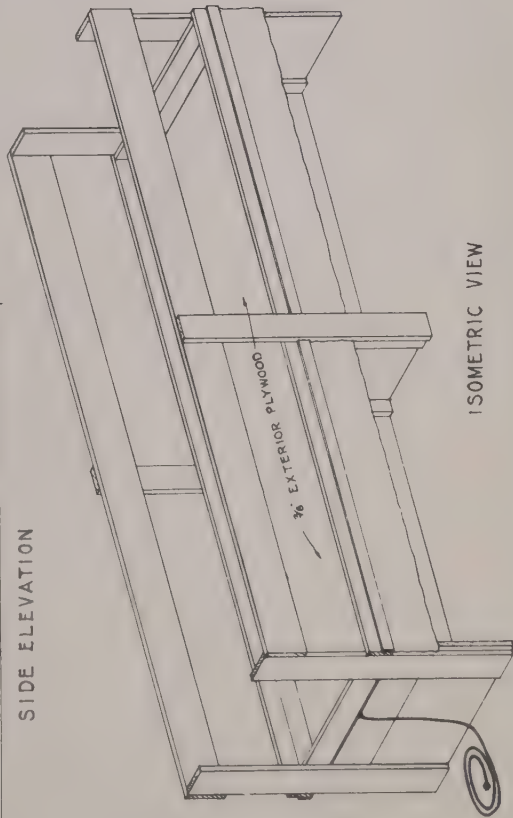
1 PC. EXTERIOR PLYWOOD
1 PC. 1'-1" HARDWARE CLOTH
1 PC. REFLECTING METAL
1 PC. HEAVY CANVAS
28" x 4" 1 PC.
NAILS AS REQUIRED

ELECTRICAL:

NON-METALLIC JUNCTION BOXES 4 EA
PORCELAIN LIGHT RECEPTACLE 4 EA
NON-METALLIC JUNCTION BOXES 4 EA
LIGHT BULBS (SIZE VARIES) 4 EA
WITH HEATING REQUIREMENTS)
NON-METALLIC SHEATHED CABLE NO. 14-2 10 FT.
RUBBER COATED EXTENSION CORD NO. 14-2 10 FT.
MALE PLUG 1 EA

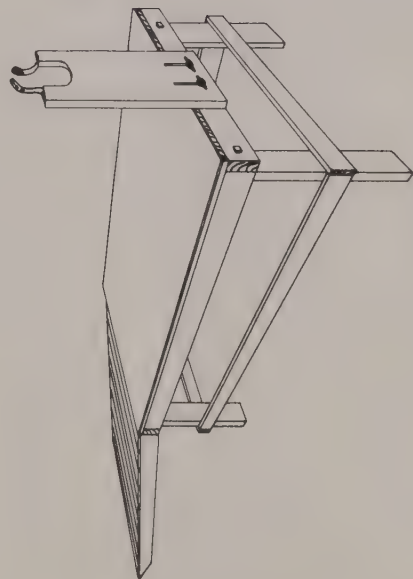
NOTE:

ATTACH FOUR 4'-4" LAMBING PENS TO EACH
THREE BROODERS.
WHEN THE UNITS ARE PLACED END TO END,
EACH BROODER MUST BE PLUGGED IN SEPARATELY
TO AN ELECTRICAL SERVICE OUTLET WHICH IS
PROPERLY WIRED TO CARRY THE LOAD.

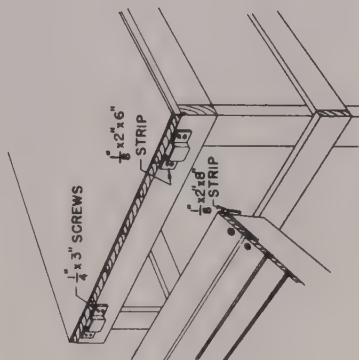


ISOMETRIC VIEW

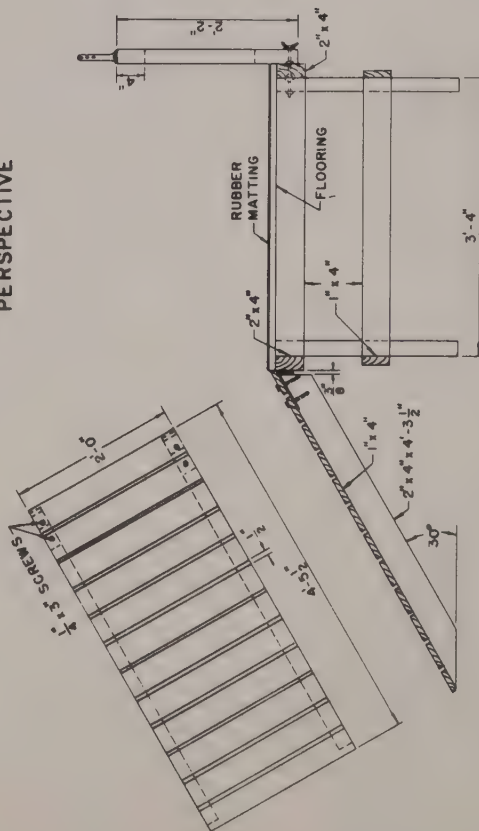
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS DEPARTMENT OF AGRICULTURAL ENGINEERING UNIVERSITY OF MARYLAND AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATIVE	
COMBINATION LAMB BROODER AND EWE FEEDER	
ORE. '58	EX 5663
SHEET 1 OF 1	



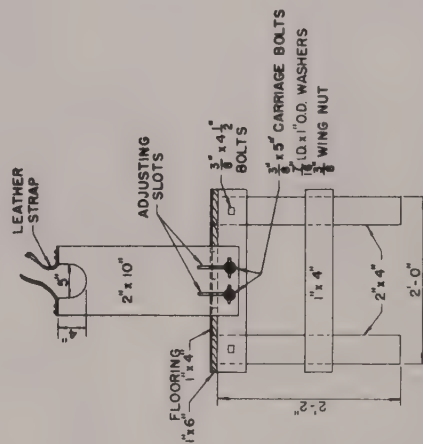
PERSPECTIVE



PERSPECTIVE



SIDE VIEW

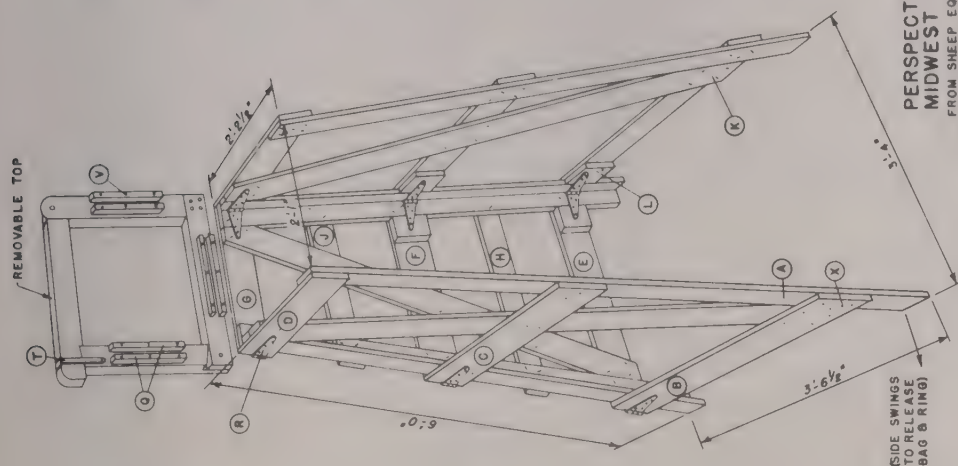


FRONT VIEW

REMOVABLE TOP

CUTTING LIST		DESCRIPTION	QUANTITY
A	1	4 x 6'-0" CORNER POSTS	4
B	1	4 x 3'-6" BOTTOM TIE	2
C	1	6 x 2'-11" MIDDLE TIE	2
D	1	6 x 2'-4" TOP TIE OR FRAME	2
E	1	6 x 3'-5" BOTTOM TIE OR STEP	1
F	1	6 x 2'-10" MIDDLE TIE OR STEP	1
G	1	6 x 2'-3" TOP TIE OR FRAME	1
H	1	4 x 2'-11" INTERMEDIATE STEP	1
I	1	4 x 2'-4" INTERMEDIATE STEP	1
J	1	4 x 6'-0" DIAGONAL BRACES	3
K	1	6 x 3'-4" HINGE BLOCKING	1
L	1	4 x 2'-4" HARDWOOD FRAME	2
M	1	2 x 4 x 2'-6" HARDWOOD FRAME	1
N	1	2 x 4 x 2'-1" HARDWOOD FRAME	1
O	1	1 x 3 x 18" HARDWOOD (BAG HOLDER)	4
P	1	1 x 1 x 12" HARDWOOD (CLAMPS)	6
Q	1	6-STRAP HINGES (WITH SCREWS)	6
R	1	5/8" x 2" x 8" BOLT	2
S	1	3/8" x 1/2" x 18" STRAP	1
T	1	1/4" x 1/2" x 8" ROD	1
U	1	1/4" x NO. 8 FLATHEAD WOOD SCREWS	30
V	1	5/8" x 5/8" BOLT	1
W	1	6d (RING OR SCREW SHANK) NAILS	1 LB.

NOTE: ENTIRE RACK TO BE MADE OF ROUGH LUMBER.



**PERSPECTIVE OF
MIDWEST TYPE RACK**
FROM SHEEP EQUIPMENT PLANS
MIDWEST PLAN SERVICE, AMES IOWA.

USE OF THE WOOL PACKING RACK

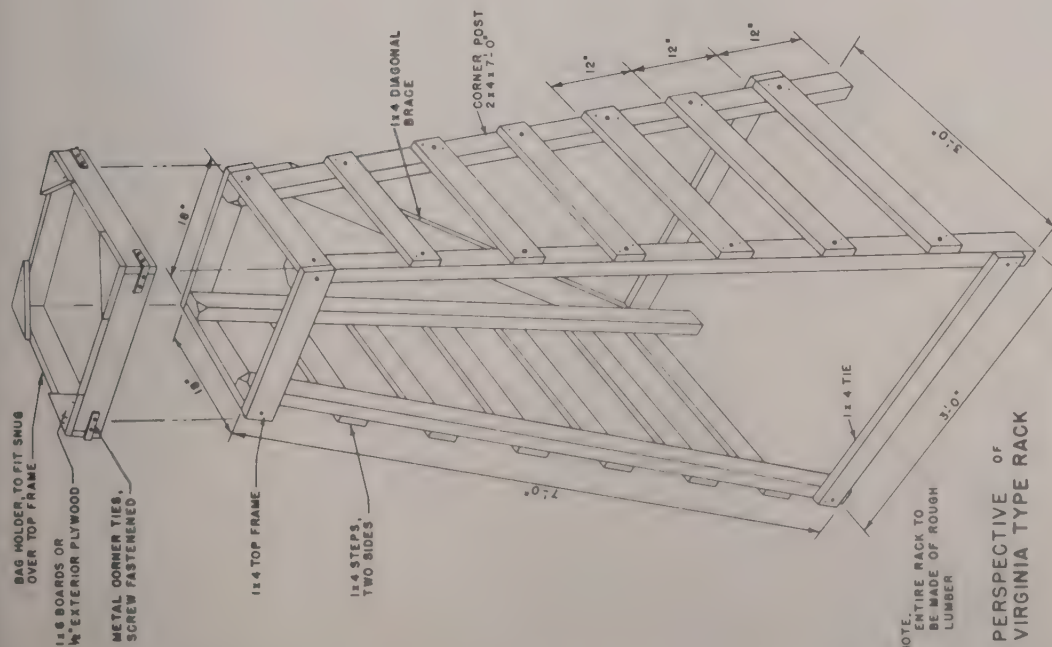
FIRST, PLACE THE BAG IN THE RACK WITH THE MOUTH OF THE BAG FOLDED DOWN OVER THE TOP OF THE FRAME ABOUT 6" (IT MAY BE NECESSARY TO CUT THE SEAM OF SMALL-MOUTH BAGS ABOUT 4").

NEXT, PLACE THE BAG HOLDER DOWN OVER THE TOP OF THE RACK TO HOLD THE BAG SECURELY.

AFTER SHEARING EACH SHEEP, TIE THE FLEECE WITH PAPER TWINE.

PACK THE FLEECES INTO THE BAG IN LAYERS OF 4 OR 5 BY CLIMBING INTO THE BAG AND TRAMPING THE WOOL.

WHEN THE BAG IS FILLED AND READY TO BE REMOVED PLACE A BOARD UNDER IT AND RAISE SLIGHTLY. THIS WILL RELEASE THE PRESSURE AT THE TOP SO THE BAG WILL NOT TEAR WHEN THE BAG HOLDER IS REMOVED. CAPACITY OF THE BAG IS ABOUT 200 POUNDS.



NOTE.
ENTIRE RACK TO
BE MADE OF ROUGH
LUMBER

PERSPECTIVE OF VIRGINIA TYPE RACK

ITEM	SIZE	QUANTITY
CORNER POSTS	2 x 4 x 14'-0"	2
BAG HOLDER BRACE	1 x 6 x 1'-0"	1
STEPS (TWO SIDES)	1 x 4 x 6'-0"	4
DIAGONAL BRACE AND BOTTOM TIES	1 x 4 x 12'-0"	1
BAG HOLDER AND TOP FRAME	1 x 4 x 14'-0"	1
METAL CORNER TIES		4
WOOD SCREWS (FLATHEAD)	1" - NO 10	16
	" - NO 10	30
WAILS (RING OR SCREW SHANK)	2" - 8d	1LB

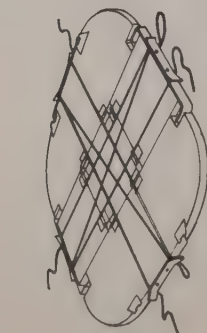
USE OF THE WOOL PACKING RACK

* DETAILS OF A WOOL BOX USED FOR TYING FLEECE-SEE PLAN EX 5805

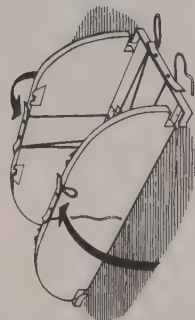
COOPERATIVE EXTENSION WORK IN
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UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

WOOL PACKING RACKS

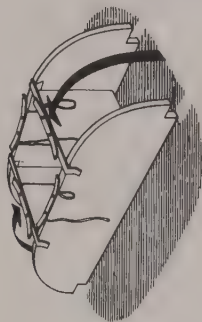
USDA '60 EX. 5911 SHEET 1 OF 1



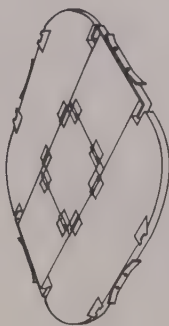
- ① BOX UNFOLDED, PAPER TWINE IN PLACE LAY FLEECE FLESH SIDE DOWN WITH CLEAN TAGS & LOOSE ENDS IN THE CENTER.



- ② RAISE & HOLD SIDES

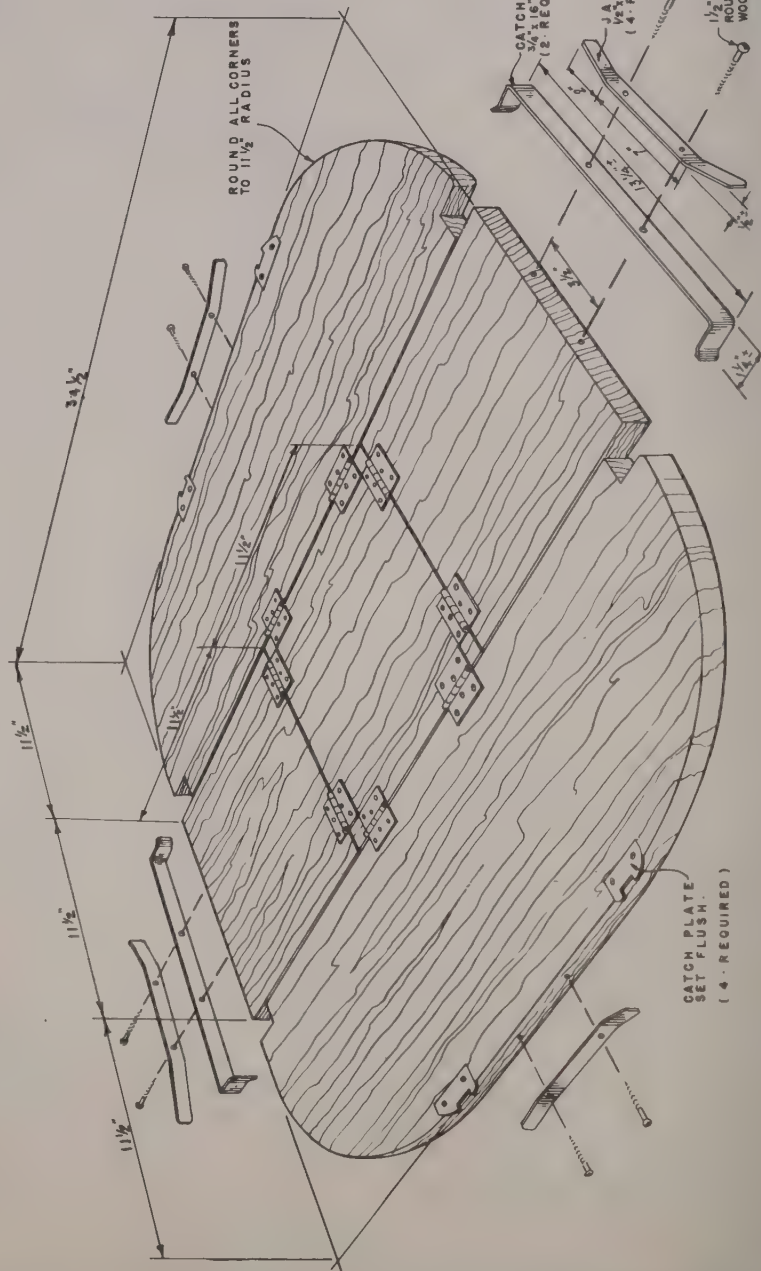


- ③ RAISE ENDS, CLOSING AND LOCKING THE BOX. TIE FLEECE.



- ④ RELEASE ENDS, UNFOLDING BOX, WEIGH, TAG, AND PACK FLEECE IN WOOL BAG.

OPERATION OF THE WOOL BOX



NOTES:
1. DIMENSIONS SHOWN ARE BASED ON USE OF STANDARD 1" RUBBER DRESSED. THIS IS IDEAL FOR FLEECES OF 8 TO 10 POUNDS.

2. THE PLAN MAY BE MODIFIED AS DESIRED TO SUIT INDIVIDUAL PREFERENCES.

3. ALL WOOD PARTS SHOULD BE SANDED & CORNERS SMOOTHLY ROUNDED, REMOVE CORNERS TO PREVENT INJURY TO FLEECES TO AVOID SNAGGING WOOL.

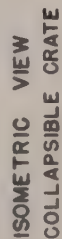
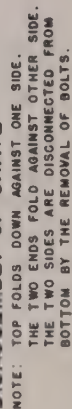
4. TIE FLEECES WITH PAPER TWINE ONLY.

PLAN EX. 5806 SHOWS DETAILS OF A WOOL PACKING RACK WHICH HOLDS THE WOOL BAG IN A CONVENIENT POSITION.

CUTTING & ASSEMBLY DIAGRAM



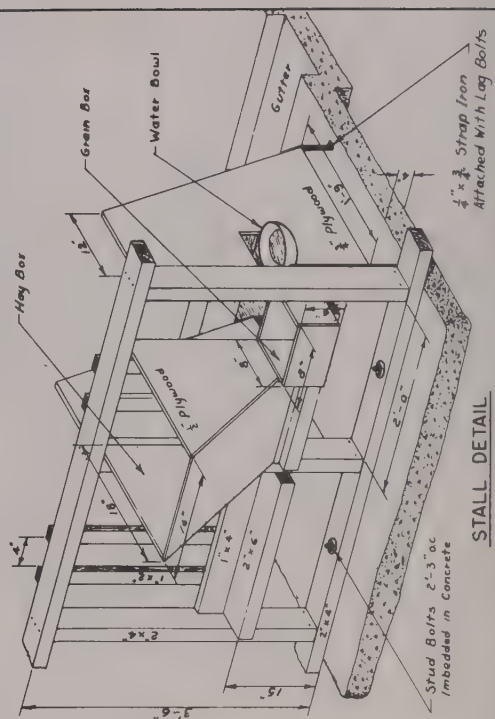
5-1-6
5-1-6
5-1-6



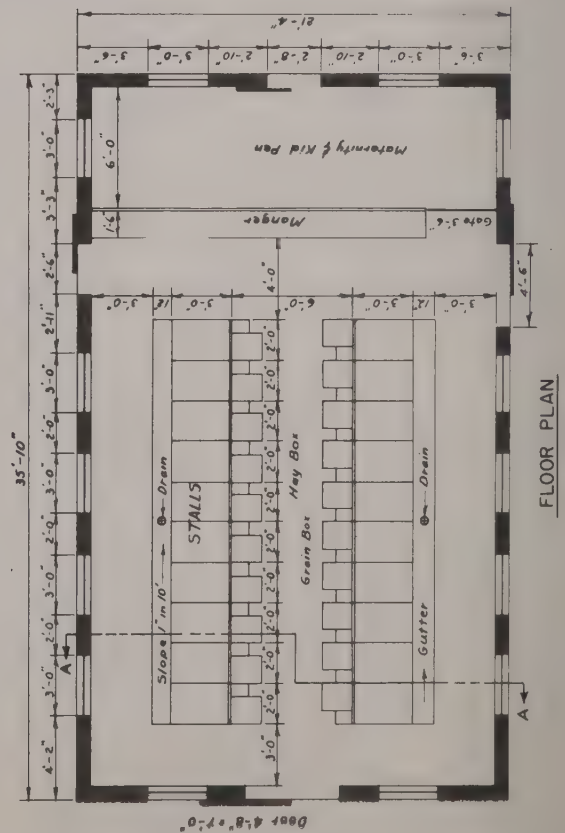


CROSS SECTION A-A

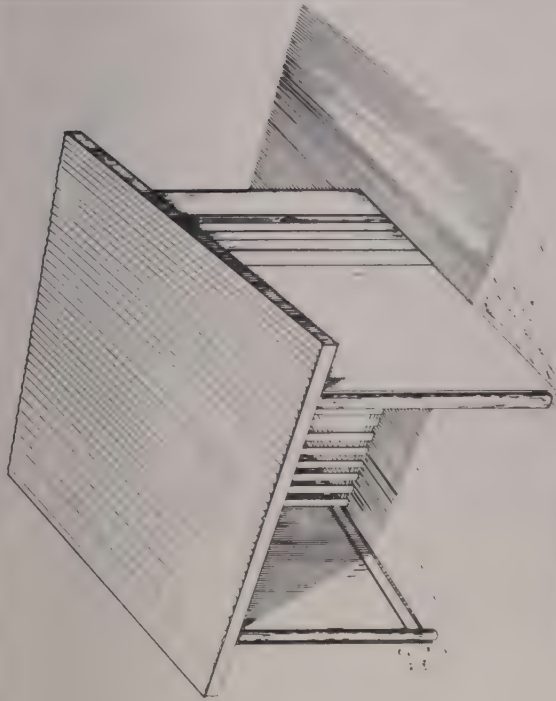
NOTE: For large goats stall width may be increased to 2'-6".



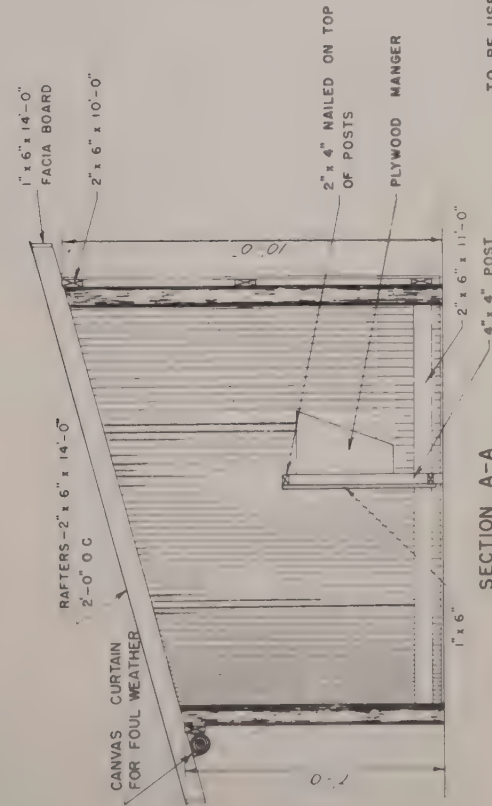
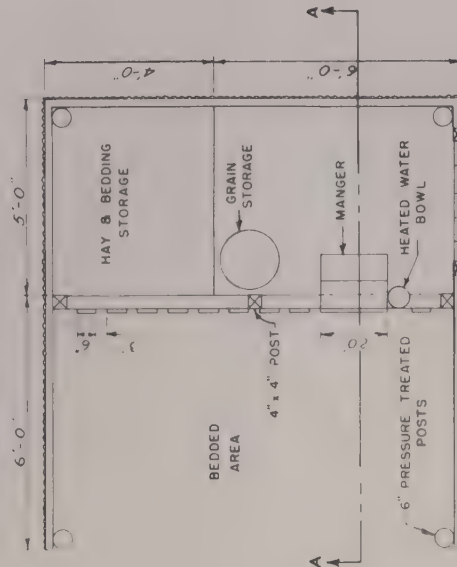
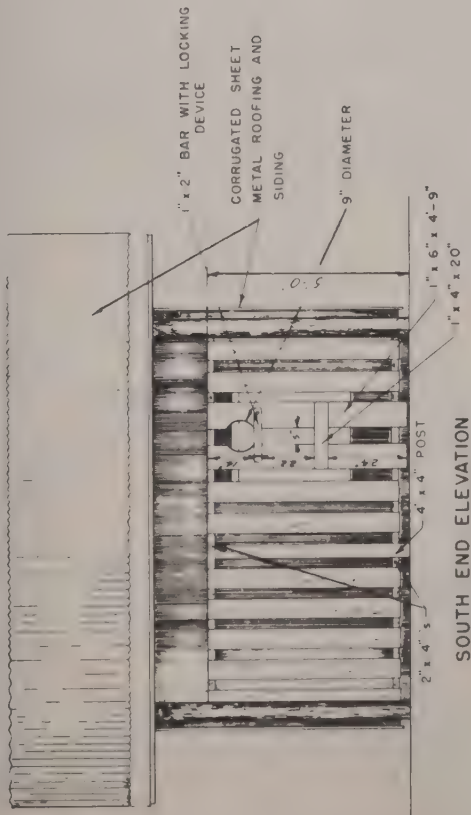
STALL DETAIL



FLOOR PLAN



PERSPECTIVE



TO BE USED WITH:

DAIRY GOAT CORRESPONDENCE COURSE 105

LESSON NO 4

THE PENNSYLVANIA STATE UNIVERSITY
AGRICULTURAL EXTENSION SERVICE

BUCK BARN

ORDER NO 728-104

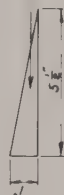
SHEET 1 OF 1

1/1/59

SIDE VIEW

SECTION A-A

**ENLARGED VIEW OF
CORNER DETAIL**



SECTION B-B

SIDE VIEW

PERSPECTIVE VIEW
OF
DOUBLE FEEDER

TO BE USED WITH:

DAIRY GOAT CORRESPONDENCE COURSE 105

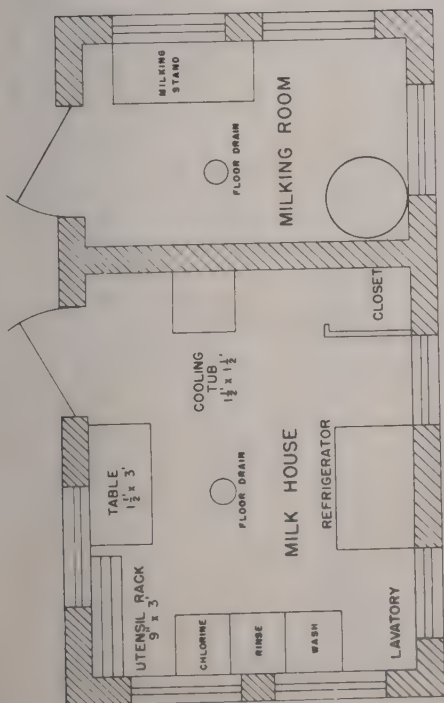
LESSON NO. 5

THE PENNSYLVANIA STATE UNIVERSITY
AGRICULTURAL EXTENSION SERVICE

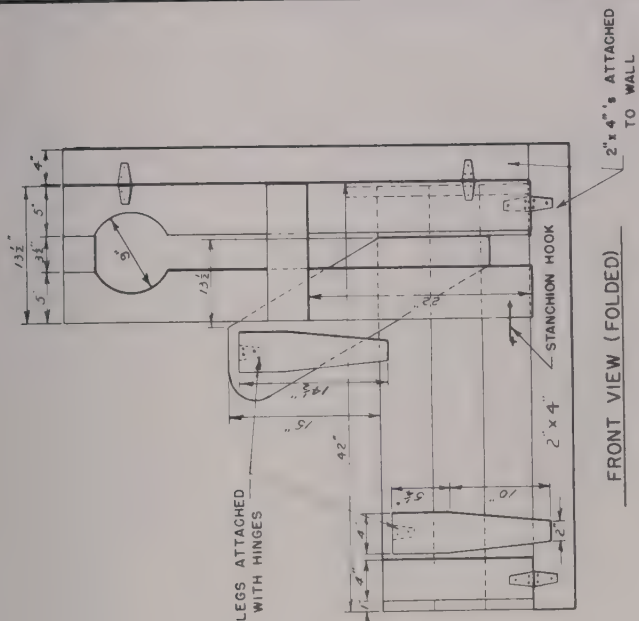
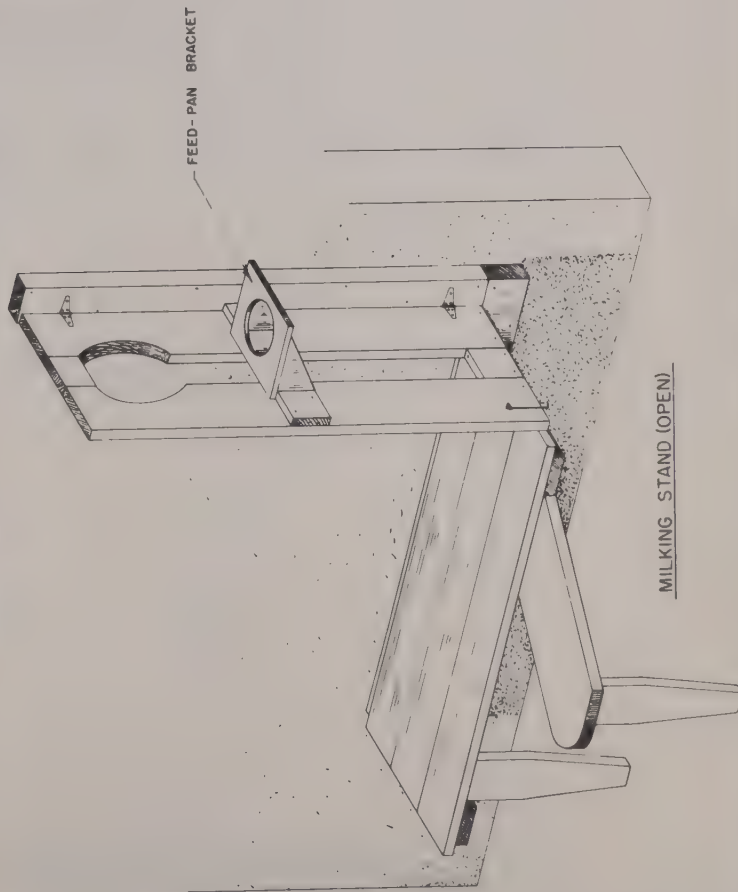
FEED RACKS FOR GOATS

ORDER NO. 728-99

27/7/59



FLOOR PLAN



NOTE: MILK HOUSE AND MILKING ROOM FLOORS TO BE OF SMOOTH CONCRETE.

WALLS MAY BE OF BLOCK OR FRAME CONSTRUCTION

TO BE USED WITH:

DAIRY GOAT CORRESPONDENCE COURSE 105

LESSON NO. 5

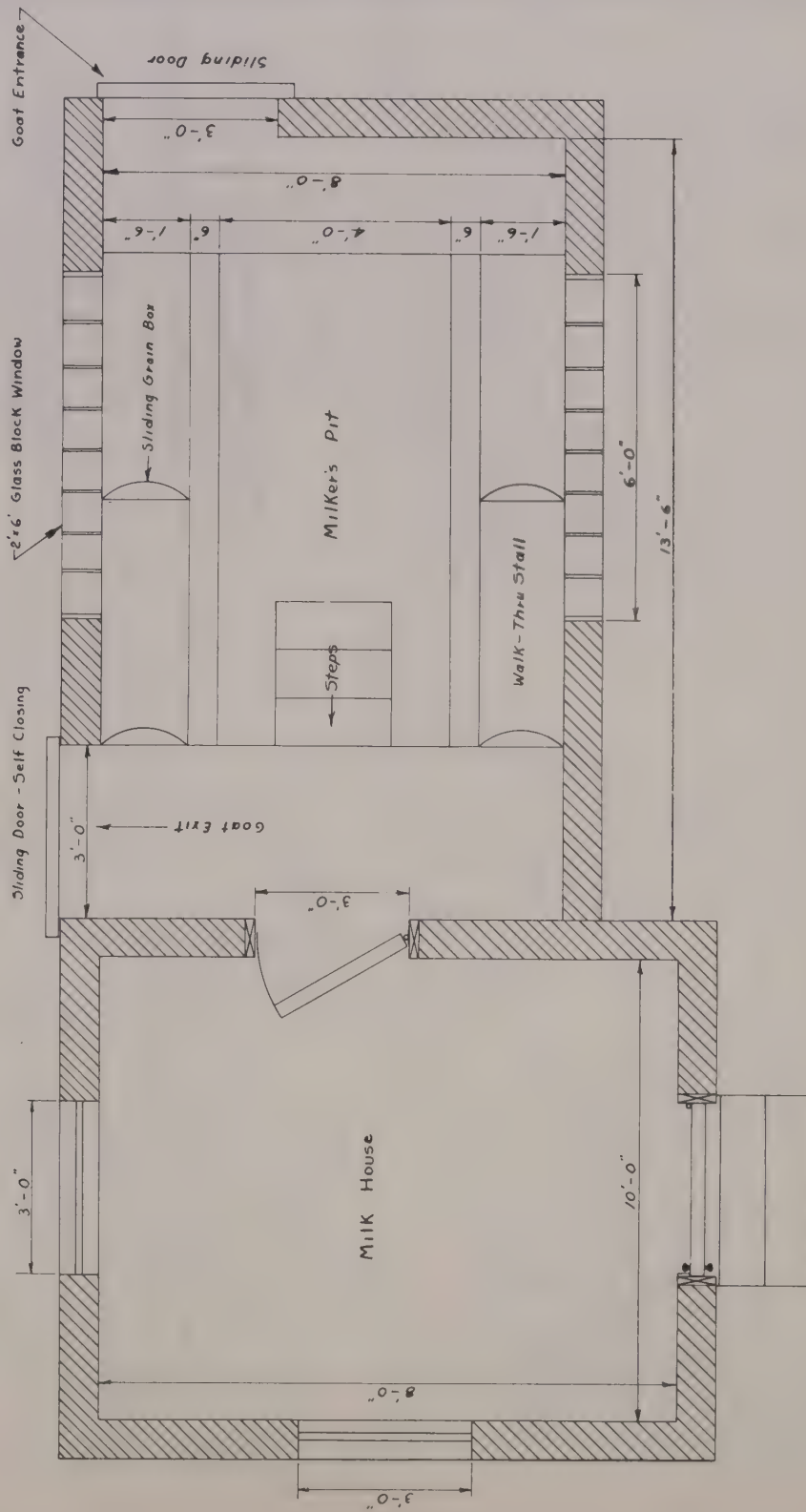
THE PENNSYLVANIA STATE UNIVERSITY
AGRICULTURAL EXTENSION SERVICE

MILK HOUSE, MILKING ROOM,
& MILKING STAND FOR GOATS

ORDER NO. 728-100

SHEET 1 OF 1

26/7/59



FLOOR PLAN

TO BE USED WITH

DAIRY GOAT CORRESPONDENCE COURSE 105

LESSON NO. 5

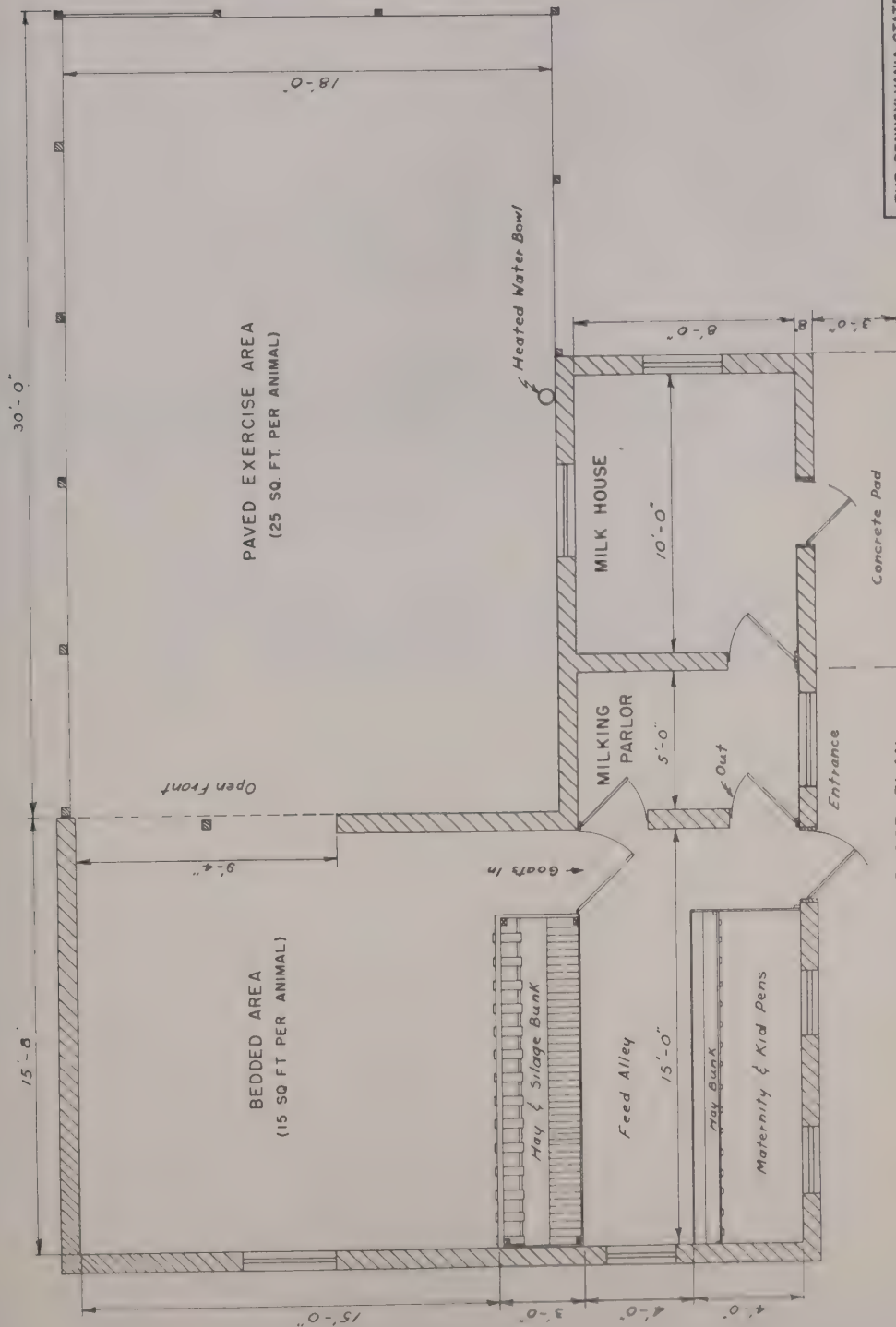
THE PENNSYLVANIA STATE UNIVERSITY
AGRICULTURAL EXTENSION SERVICE

**WALK-THRU
MILKING PARLOR FOR GOATS**

ORDER NO. 728-101

26/1/53

SHEET 1 OF 1



THE PENNSYLVANIA STATE UNIVERSITY AGRICULTURAL EXTENSION SERVICE
LOOSE HOUSING FOR 20 GOATS & KIDS
ORDER NO 728-102
SHEET 1 OF 1

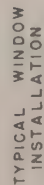
TO BE USED WITH:
DAIRY GOAT CORRESPONDENCE COURSE 105
LESSON 5

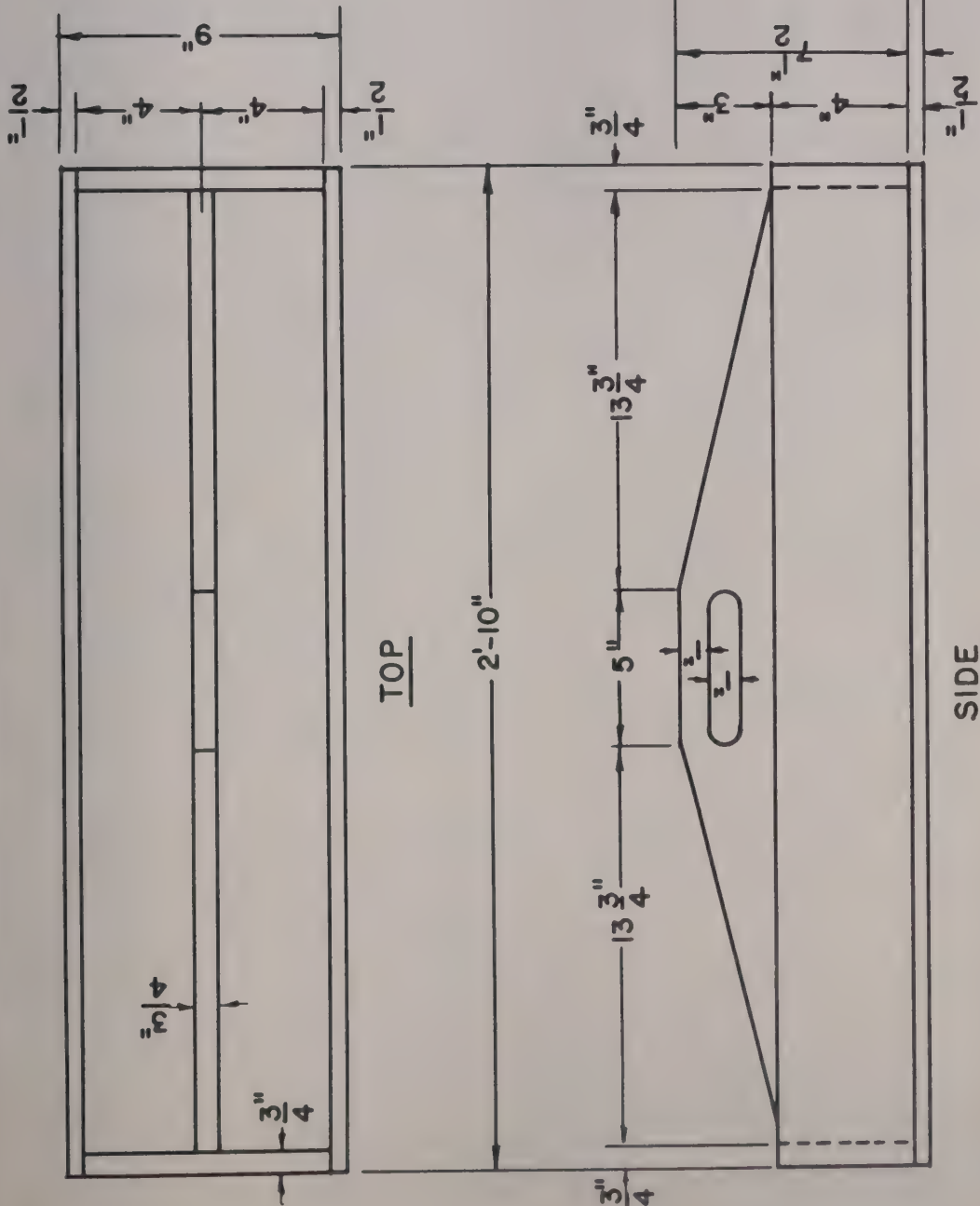
FLOOR PLAN

24/7/59

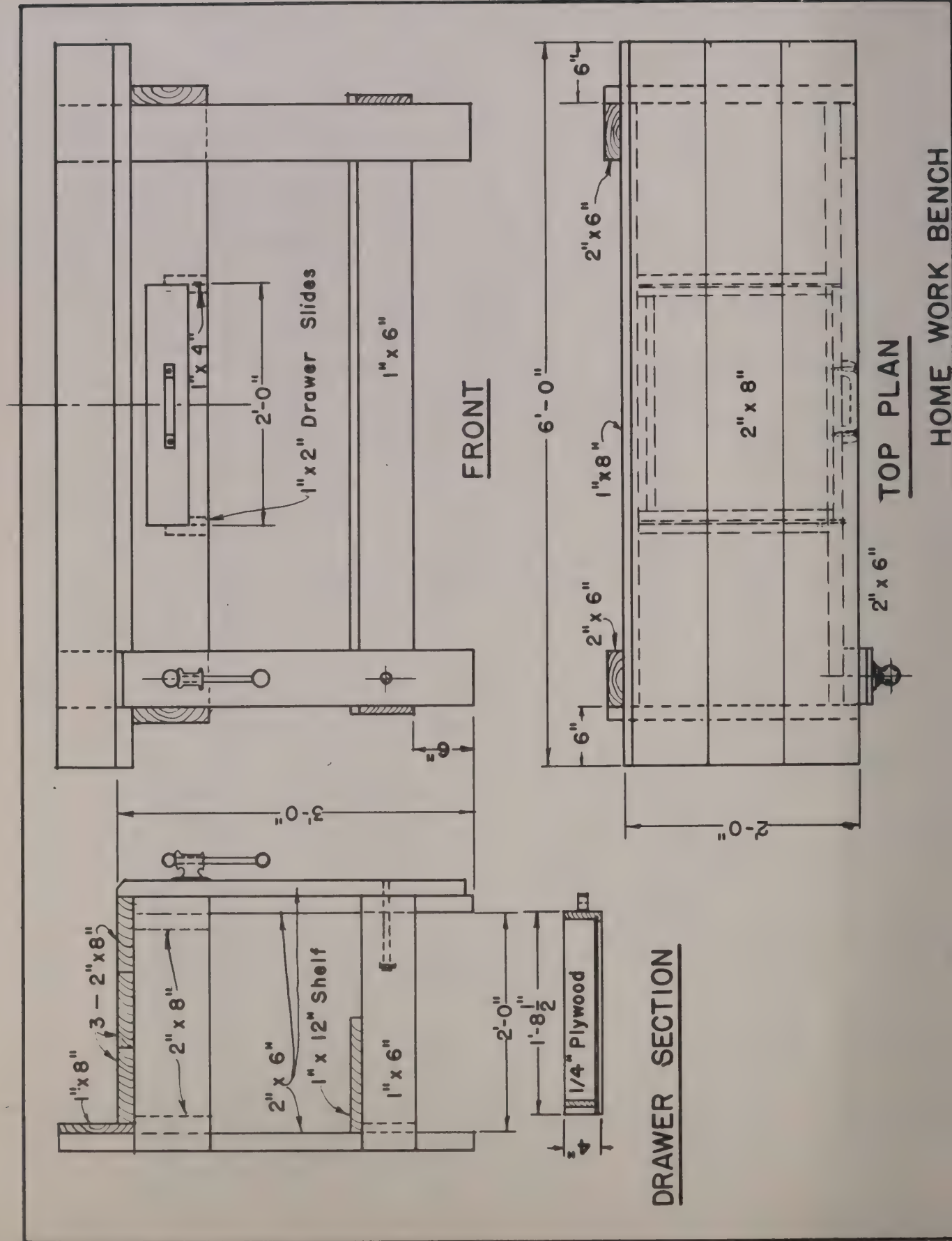
MISCELLANEOUS STRUCTURES

Design by Penn. State College, Exp. Sta.

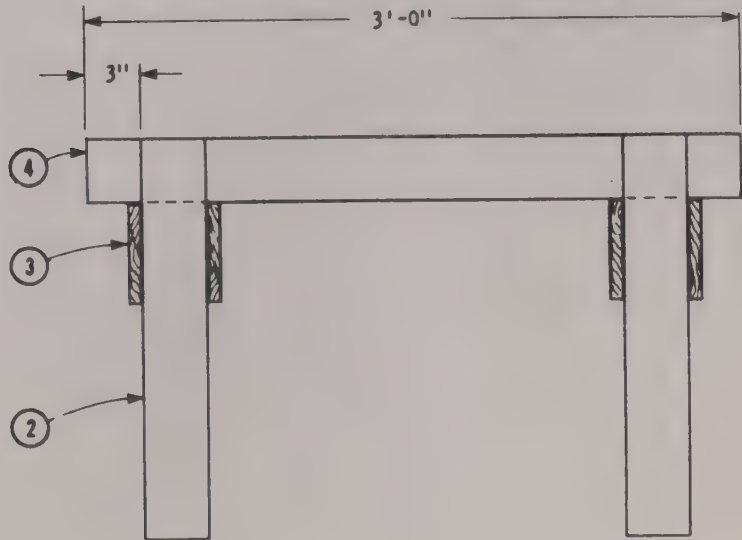
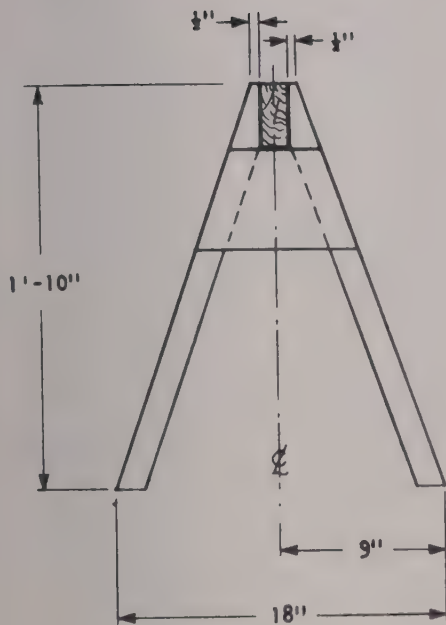




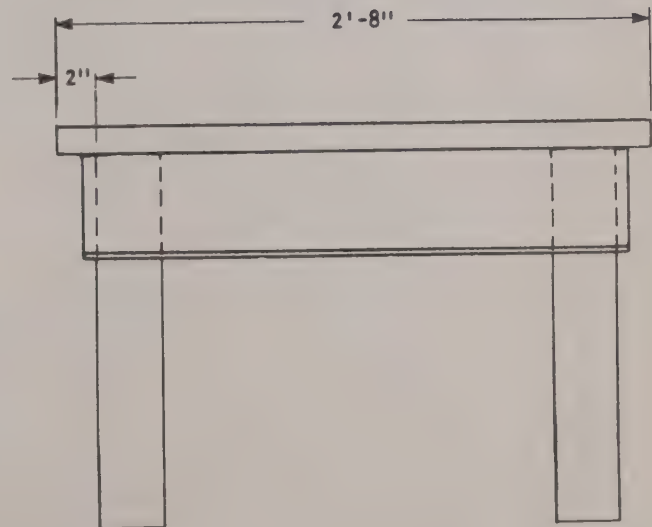
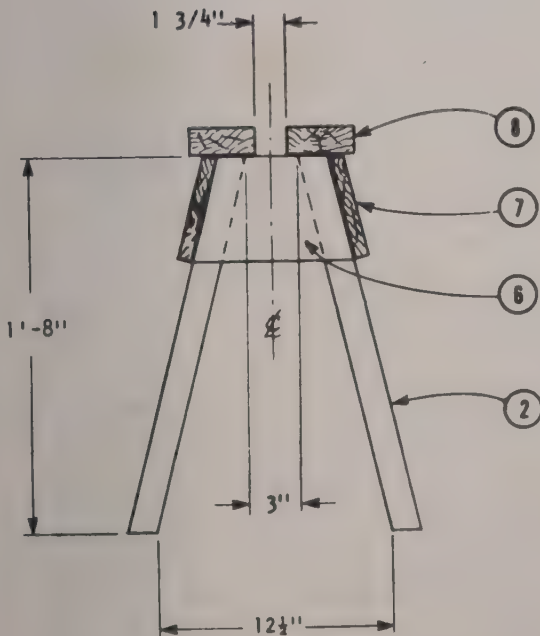
TOOL BOX



SAW HORSES

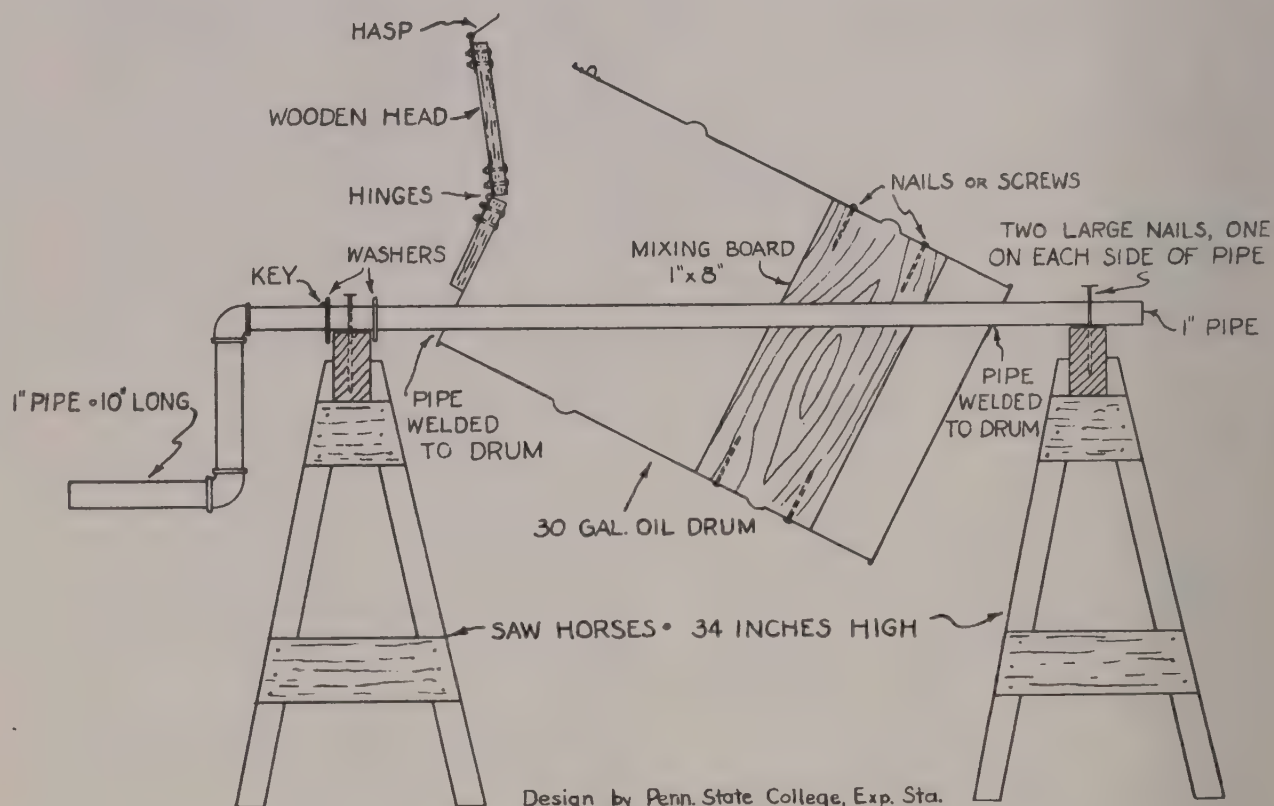


1



5

1. saw horse
2. 2" X 4" leg, 4 req'd.
3. 1" X 6" brace, 4 req'd.
4. 2" X 4" cross bar
5. saw horse (slotted)
6. 1" X 6" end brace, 2 req'd.
7. 1" X 6" side brace, 2 req'd.
8. 2-2" X 4" cross bars



Design by Penn. State College, Exp. Sta.

COOPERATIVE EXTENSION WORK IN AGRICULTURE
AND HOME ECONOMICS
TEXAS A&M COLLEGE SYSTEM AND
U.S. DEPARTMENT OF AGRICULTURE COOPERATING
G.G. GIBSON, DIRECTOR, COLLEGE STATION, TEXAS

MIXER MADE FROM OIL DRUM

DRAWN BY: M. R. B.

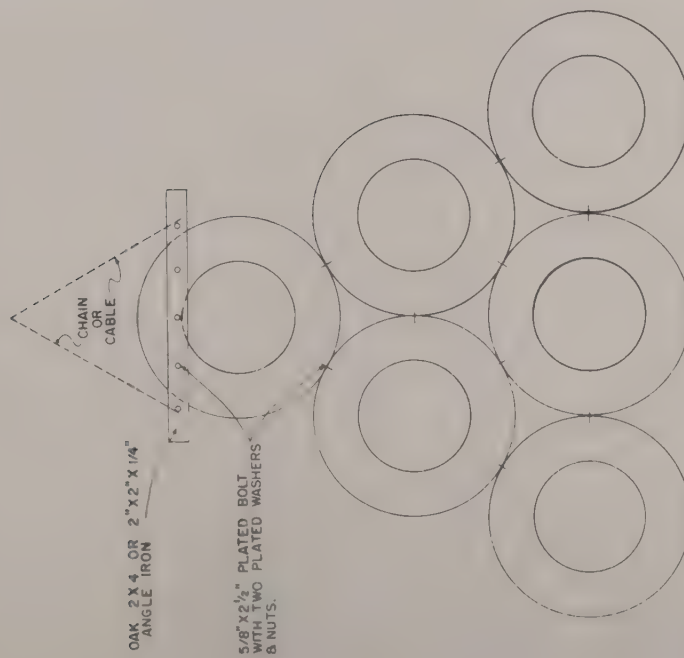
SCALE AS SHOWN

TRACED BY: B. G. K.

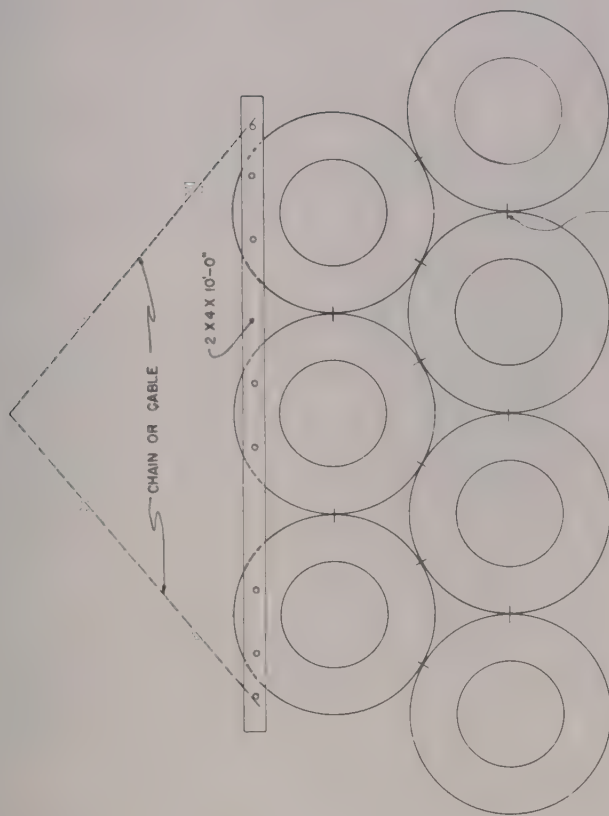
SHEET 1 OF 1

REV. SEPT., 1953

SERIAL NO. 235



MATERIALS:
 7 - TIRES - PREFERABLY TRUCK TYPE (60000)
 1 - TREATED 2 X 4
 19 - 5/8" X 2 1/2" PLATED BOLTS
 38 - LARGE PLATED WASHERS



MATERIALS:
 7 - TIRES - PREFERABLY TRUCK TYPE
 (900-20 OR 825-20)
 1 - TREATED 2 X 4
 19 - 5/8" X 2 1/2" PLATED BOLTS
 38 - LARGE PLATED WASHERS

BASED ON: AUBURN UNIV. PLAN NO. G-408

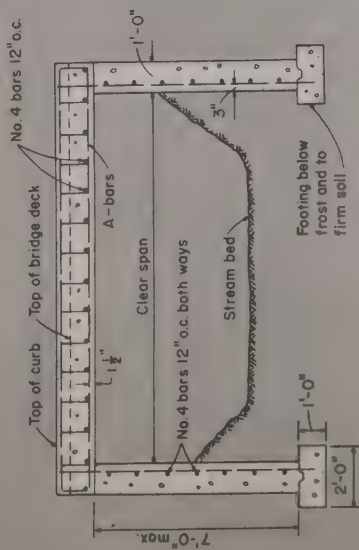


COOPERATIVE EXTENSION WORK IN
 AGRICULTURE AND HOME ECONOMICS

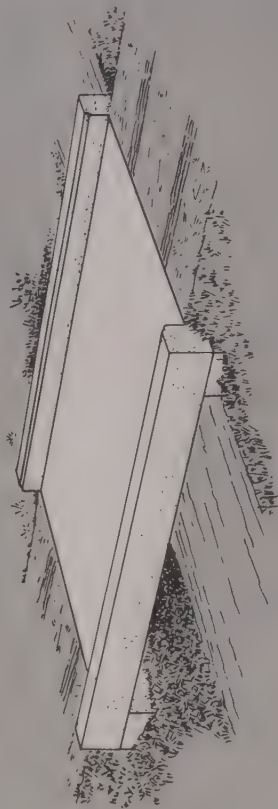
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

PASTURE DRAG

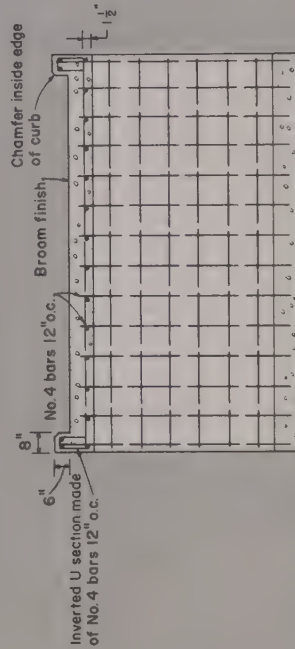
ALA. '75 6212 SHEET 1 OF 1



CROSS-SECTION



GENERAL VIEW



BUTTRESS ELEVATION

Clear Span (ft.)	Slab Thickness (in.)	A - Bars Required
6	7	No. 6 bars 8" o.c.
9	8	No. 6 bars 7" o.c.
12	9	No. 6 bars 6" o.c.
15	10	No. 6 bars 5" o.c.

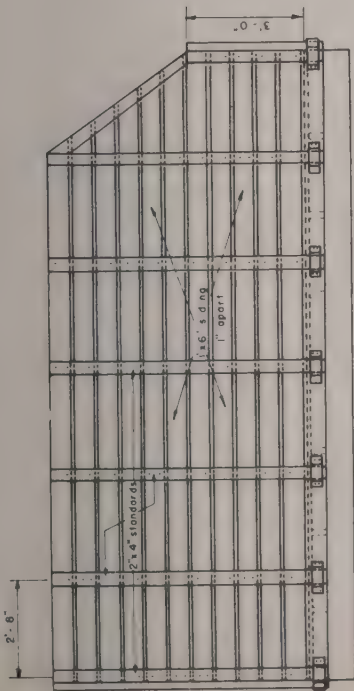
Assumed conditions: 10-ton max load
 2,000 psf soil bearing pressure
 $f'_c = 3,000$ psi $f'_c = 1,200$ psi
 $f_s = 20,000$ psi $n = 10$

FARM BRIDGE

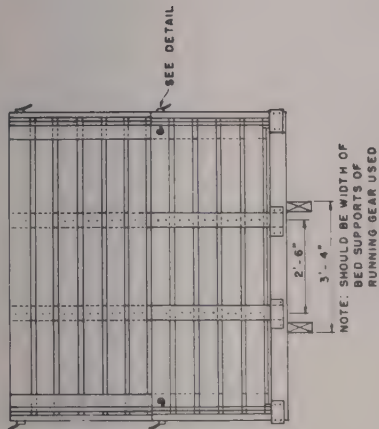
THIS IS A TYPICAL DESIGN AND SHOULD NOT BE USED AS A WORKING DRAWING. IT IS INTENDED TO BE HELD AS A GUIDE ONLY. THE DESIGNER SHALL BE RESPONSIBLE FOR ADAPTING THIS DESIGN TO LOCAL CONDITIONS AND SHOULD CONSULT WITH A QUALIFIED ENGINEER OR ARCHITECT BEFORE PROCEEDING WITH CONSTRUCTION.

PORTLAND CEMENT ASSOCIATION

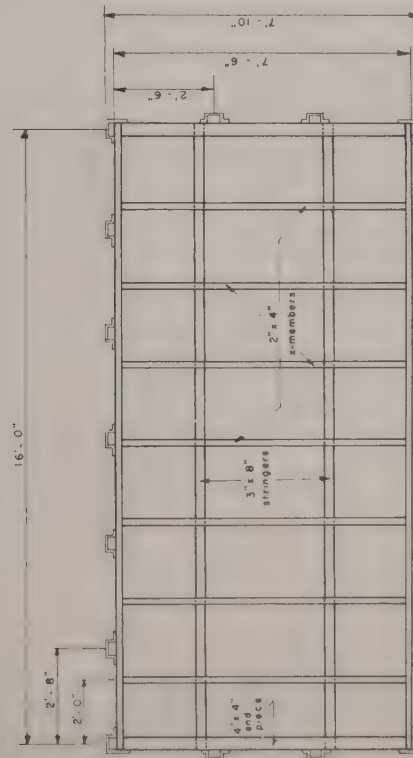
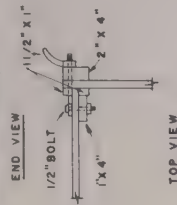
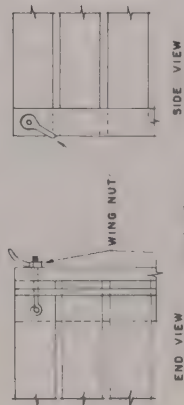
FP 910A



SIDE ELEVATION



FRONT ELEVATION



TRAILER BED
PLAN

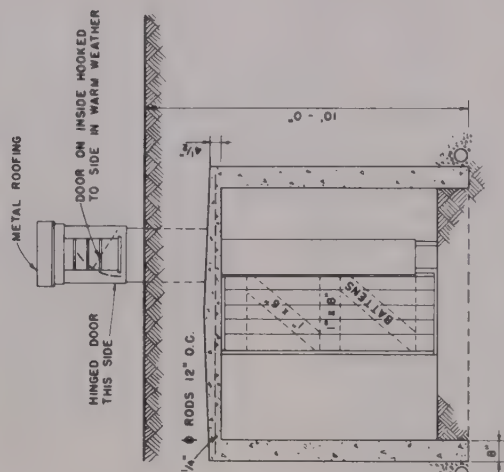
COOPERATIVE EXTENSION WORK IN AGRICULTURE AND
HOME ECONOMICS

THE TEXAS A. & M. COLLEGE SYSTEM AND U. S.
DEPARTMENT OF AGRICULTURE COOPERATING

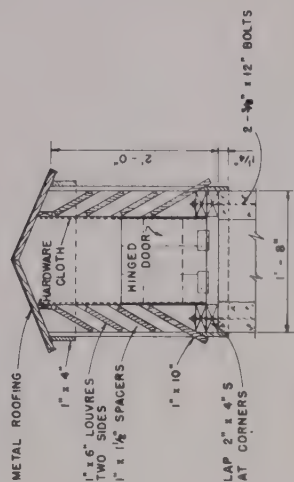
J. E. HUTCHINSON, DIRECTOR, COLLEGE STATION, TEXAS

TWO BALE COTTON TRAILER
(DESIGNED FOR USE WITH COTTON STRIPPER)

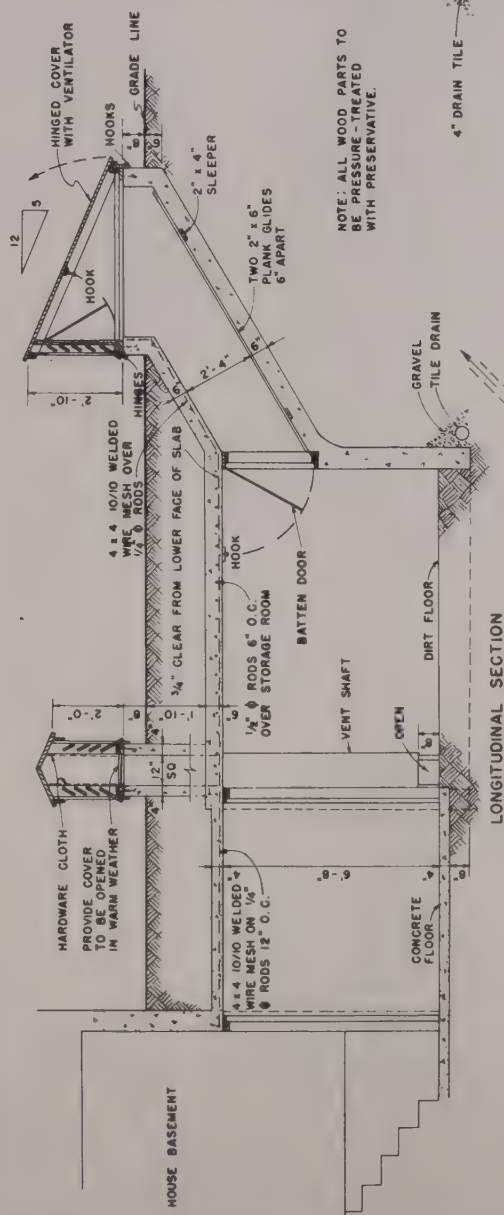
DRAWN BY: WLU	OWN
TRACED BY: J.F.H.W.	SHEET 1 OF 1
DATE: 9/10/59	SERIAL NO. 462



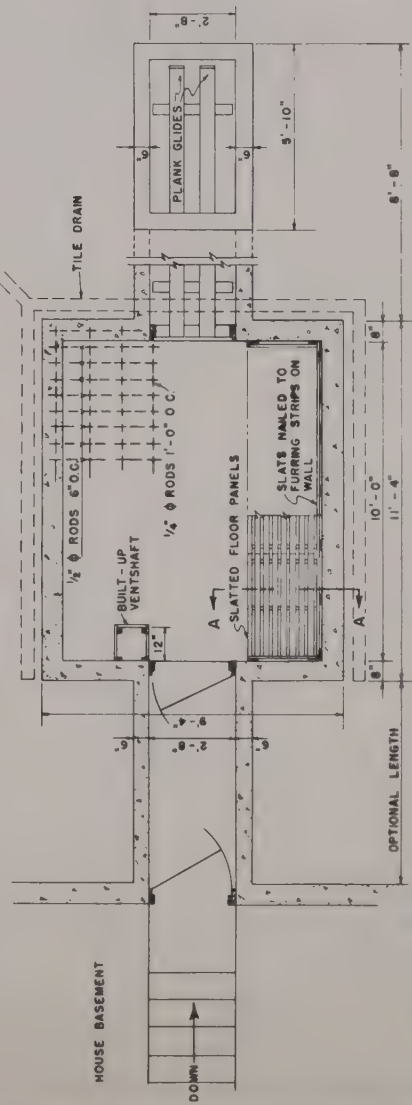
CROSS SECTION



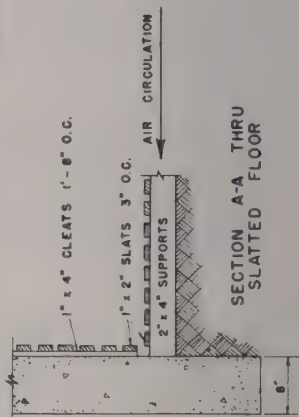
SECTION THRU VENTILATOR



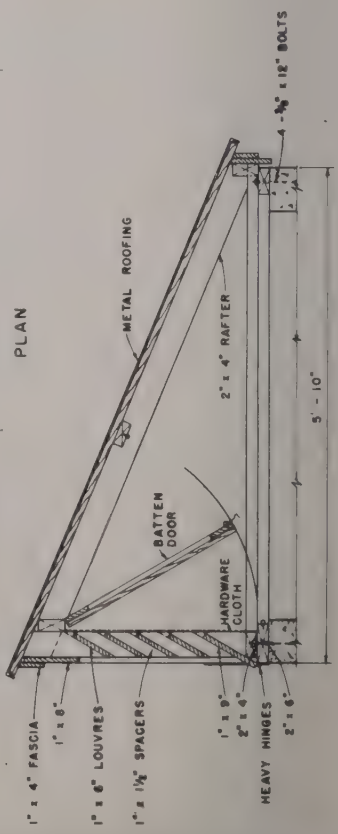
LONGITUDINAL SECTION



PLAN



SECTION A-A THRU SLATTED FLOOR



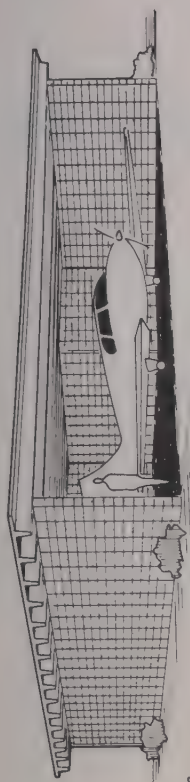
DETAIL OF HINGED COVER FOR OUTSIDE FILLING DOOR

COOPERATIVE EXTENSION WORK IN
AGRICULTURE AND HOME ECONOMICS
DEPARTMENT OF AGRICULTURAL ENGINEERING
UNIVERSITY OF MARYLAND
AND
UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

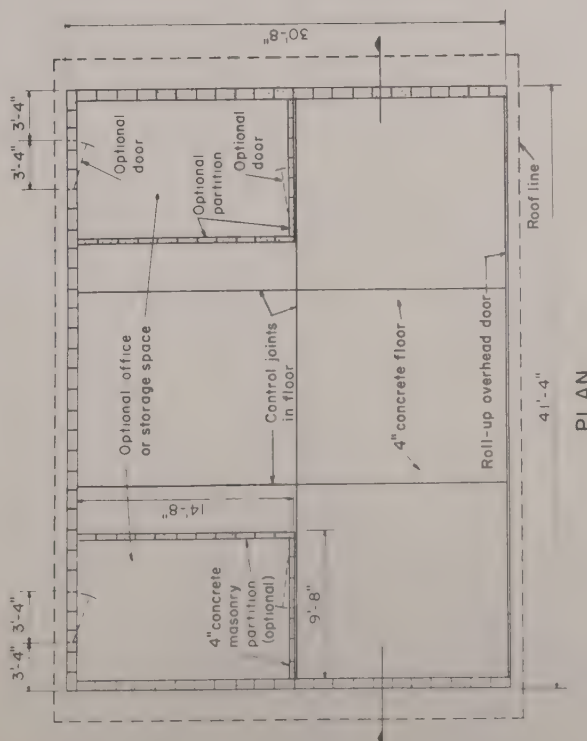
STORM & STORAGE CELLAR

USDA '59 EX. 5866 SHEET 1 OF 1

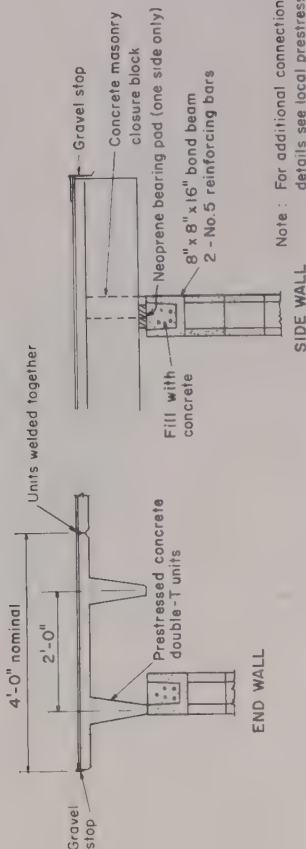
See detail



GENERAL VIEW



PLAN



ROOF DETAILS

Note : For additional connection details see local prestress producer

HANGAR FOR FLYING FARMERS

THIS IS A TYPICAL DESIGN AND SHOULD NOT BE USED AS A WORKING DRAWING. IT IS INTENDED TO BE HELPFUL IN THE PREPARATION OF COMPLETE PLANS WHICH SHOULD BE ADAPTED TO LOCAL CONDITIONS AND SHOULD CONFORM WITH LEGAL REQUIREMENTS.

WORKING DRAWINGS SHOULD BE PREPARED AND APPROVED BY A QUALIFIED ENGINEER OR ARCHITECT.

PORTLAND CEMENT ASSOCIATION

FP 924

APPENDICES

Appendix

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B.	PLANS AVAILABLE FROM THE U.S. DEPARTMENT OF AGRICULTURE	273
C.	PLANS AVAILABLE FROM THE AMERICAN PLYWOOD ASSOCIATION	279
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Appendix A

EXTENSION PLAN SERVICE OFFICES

U.S. DEPARTMENT OF AGRICULTURE

ALABAMA

Auburn University
Auburn, AL 36830

ALASKA

University of Alaska
Fairbanks, AK 99701

ARIZONA

University of Arizona
Tucson, AZ 85721

ARKANSAS

Extension Plan Service
P. O. Box 391
Little Rock, AR 72203

CALIFORNIA

University of California
Davis, CA 95616

COLORADO

Colorado State University
Fort Collins, CO 80523

CONNECTICUT

University of Connecticut
Storrs, CT 06268

DELAWARE

University of Delaware
Newark, DE 19711

FLORIDA

University of Florida
Gainesville, FL 32611

GEORGIA

University of Georgia
Athens, GA 30602

HAWAII

University of Hawaii
Honolulu, HI 96822

IDAHO

University of Idaho
Moscow, ID 83843

ILLINOIS

University of Illinois
Urbana, IL 61801

INDIANA

Purdue University
West Lafayette, IN 47907

IOWA

Iowa State University
Ames, IA 50010

KANSAS

Kansas State University
Seaton Hall
Manhattan, KS 66506

KENTUCKY

University of Kentucky
Lexington, KY 40506

LOUISIANA

Louisiana State University
Baton Rouge, LA 70803

MAINE

University of Maine
Orono, ME 04473

MARYLAND

University of Maryland
College Park, MD 20742

MASSACHUSETTS

University of Massachusetts
Amherst, MA 01002

MICHIGAN

Michigan State University
East Lansing, MI 48824

MINNESOTA

University of Minnesota
St. Paul, MN 55101

MISSISSIPPI

Mississippi State University
Mississippi State
MS 39762

MISSOURI

University of Missouri
Columbia, MO 65201

MONTANA

Montana State University
Bozeman, MT 59715

NEBRASKA

University of Nebraska
Lincoln, NE 68403

NEVADA

University of Nevada
Reno, NV 89507

NEW HAMPSHIRE

University of New
Hampshire
Durham, NH 03824

(Continued)

NEW JERSEY

Rutgers University
New Brunswick, NJ 08903

NEW MEXICO

New Mexico State
University
Las Cruces, NM 88003

NEW YORK

Cornell University
Riley-Robb Hall
Ithaca, NY 14853

NORTH CAROLINA

North Carolina State
University
Raleigh, NC 27607

NORTH DAKOTA

North Dakota State
University
Fargo, ND 58102

OHIO

The Ohio State University
Columbus, OH 43210

OKLAHOMA

Oklahoma State University
Stillwater, OK 74074

OREGON

Oregon State University
Corvallis, OR 97331

PENNSYLVANIA

The Pennsylvania State
University
Ag-Eng Building
University Park, PA 16802

PUERTO RICO

University of Puerto Rico
Rio Piedras, PR 00928

RHODE ISLAND

University of Rhode Island
Kingston, RI 02881

SOUTH CAROLINA

Clemson University
Clemson, SC 29631

SOUTH DAKOTA

South Dakota State
University
Brookings, SD 57006

TENNESSEE

University of Tennessee
Box 1071
Knoxville, TN 37901

TEXAS

Texas A&M University
303 Ag-Eng Building
College Station, TX 77843

UTAH

Utah State University
Logan, UT 84322

VERMONT

University of Vermont
Burlington, VT 05401

VIRGINIA

VPI & SU
Blacksburg, VA 24061

WASHINGTON

Washington State University
Pullman, WA 99163

WEST VIRGINIA

West Virginia State
University
Morgantown, WV 26506

WISCONSIN

University of Wisconsin
460 Henry Hall
Madison, WI 53706

WYOMING

University of Wyoming
Box 3354
Laramie, WY 82071

**Agricultural Engineer, Extension Service
U.S. Department of Agriculture
Washington, DC 20250**

FARM SERVICE BUILDINGS AND EQUIPMENT
U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE COOPERATIVE*
FARM BUILDING PLAN EXCHANGE AND RURAL HOUSING

HOW TO ORDER DRAWINGS

Complete working drawings may be obtained from the extension agricultural engineer from designated state universities. The list of addresses for these offices has been provided as Appendix A of this volume. (In sending your requests, be aware that there may be a small charge to cover printing and mailing.)

At the end of the Extension Plan Service Offices list, you can also find the address for the main Agricultural Engineer at the U.S. Department of Agriculture in Washington, D.C. This office will forward your requests to the appropriate state or provide any further information you might need.

**Cooperative with the Federal and State Extension Service, State Experiment Station, and Cooperative State Research Service.*

Appendix B

PLANS AVAILABLE FROM THE U.S. DEPARTMENT OF AGRICULTURE

POULTRY

<i>Plan No.</i>	<i>Title</i>
5845	Caged Layers
5871	Poultry House
5931	Cage Laying House
5936	Cage Laying House
5972	Broiler House
5990	Laying House
5996	Incinerator
6000	Poultry House
6001	Poultry House
6036	Broiler House
6053	Pullet Rearing House
6062	Cage Laying House
6084	Broiler House
6085	Poultry House
6087	Poultry House
6095	Egg Processing Plant
6131	Poultry House, Caged Layers
6134	Poultry House, Caged Layers
6140	Poultry House, Caged Layers
6166	Cage Laying House
6187	Poultry House, 25 to 40 Layers
6188	Poultry House, 50 to 80 Layers
6189	Layer House, 15,000 Birds

SHEEP

5019	Sheep Shed
5733	Sheep Shed
5808	Sheep Feeder
5809	Sheep Chute
5811	Sheep Shed
5813	Sheep Shed
6058	Three-Way Cutting Gates
5861	Sheep Feeder
5863	Sheep Feeder
5867	Shipping Crate—Sheep
5874	Sheep Shed
5877	Sheep Crate
5905	Sheep Equipment
5910	Sheep Feeder
5911	Wool Packing Racks

SHEEP (Contd.)

<i>Plan No.</i>	<i>Title</i>
5912	Ewe Stanchion
5913	Sheep Feeders
5914	Sheep Feeder
5915	Sheep Feeder
5916	Mineral Feeder—Sheep
5917	Fences—Feeding Panels
5918	Grain Troughs
5919	Sheep Shed
5924	Loading Chute—Sheep
5926	Lambing Shelter
5999	Dipping Vat—Sheep
6006	Sheep Squeeze
6019	Corrals—Sheep
6043	Sheep Corral
6047	Sheep Chair
6096	Shearing Shed and Corral for Sheep
6142	Portable Footbath for Sheep

SWINE

5756	Hog Feeder
5783	Breeding Crate
5798	Loading Chute
5799	Loading Chute
5814	Hog Feeder
5815	Hog Feeder
5816	Hog Shade
5818	Garbage Cooker
5820	Garbage Cooker
5821	Hog House
5825	Pig Production Plant
5826	Hog House
5827	Pig Creeps
5828	Farrowing Stall
5842	Hog Wallow
5870	Hog Shade
5873	Swine Unit
5907	Pig Brooder
5945	Hog Feeding Unit
5947	Hog Feeding Unit
5986	Feeding Floor

(Continued)

SWINE (Contd.)

Plan No.	Title
5988	Swine Feeder
5992	Farrowing House
5993	Swine Unit
6026	Farrowing House
6032	Farrowing House
6056	Portable Sow Feeders
6061	Farrowing House
6073	Two Hog Houses
6074	Hog House for Gestating Sows
6075	Hog House, Nursery and Finishing
6076	Hog House, Farrowing in Crates
6088	Farrowing House for Hogs
6089	Swine Finishing Parlor
6104	Finishing Floor to 400 Pigs
6105	Swine Nursery Building
6114	Feeding Unit for Swine
6115	Farrowing, House
6116	Hog House—Modified "A" Type
6122	Farrowing House
6125	Farrowing House for Sows
6127	Breeding Facilities for Swine
6130	Farrowing House for Sows
6135	Farrowing and Nursery Building
6144	Hog Feed—Stand-Up Type
6154	House for Dry Sows
6157	Hog Houses
6159	Finish Floor for Hogs
6169	Part Stat Feed Floor
6178	Finishing Parlor for Hogs

BEEF

5974.	Corral—Beef
5991	Corral—Beef
6012	Feed Bunks—Cattle
5932	Truck Scale Pen
6049	Corral
6065	Movable Calf Shelter
6077	Walk-through Headgate—Cattle
6091	Auction Yard for Livestock
6103	Breeding Chute for Beef Cattle
6106	Corral Layout and Equipment
6108	Cubed Hay Storage Feeder
6124	Cattle Feeder—Liquid Supplement
6129	Livestock Market
6133	Squeeze Chute for Cattle
6139	Curved Holding Chute
6141	Trailer for Cattle
6152	Corral and Breeding Chute
6153	Cattle Chute—Adjustable Type
6156	Confinement Beef Barn
6158	Confinement Beef Barn
6160	Confinement Beef Barn
6161	Cattle Corral Layouts

BEEF (Contd.)

Plan No.	Title
6167	Silage Feed Bunks
6172	Cattle Shed and Auction Barn
6183	Three-Tier Loading Chute
6184	Rodeo Arena
5465	Squeeze Chute
5681	Loading Chute
5740	Cattle Stock
5754	Cattle Shelter
5759	Mineral Box
5760	Bull Pen
6051	Cattle Guards
5761	Cattle Stocks
5763	Calf Creep
5764	Calf Creep
5768	Calf Creep
5769	Mineral Box
5772	Hay Rack
5776	Cattle Feeder
5777	Hay Racks
5778	Head Gates
5779	Corrals
5784	Cattle Stock
5789	Cattle Squeeze
5790	Corral
5791	Cattle Squeeze
5792	Cattle Stock
5793	Loading Chute
5794	Pole Barn
5835	Corrals
5837	Feeding Floors
5844	Mineral Feeder
5850	Cattle Chute
5852	Loading Chute
5853	Breeding Rack
5854	Fence Line Feeder
5862	Bunk Feeder—Cattle
5864	Bunk Feeder—Cattle
5876	Dipping Vat—Cattle
5906	Mineral Feeder—Cattle
5909	Watering Trough
5920	Feedlot—Beef
5925	Cattle Feeding Rack
5939	Cattle Feed Bunk
5940	Cattle Dipping Vat
5950	Fallout Shelter—Beef
5952	Range Corral
5959	Gates and Chutes
5960	Loading Ramp
5961	Gates and Fences

DAIRY

5143	Bull Pen
5736	Milking Plant
5839	Screen Chamber

(Continued)

DAIRY (Contd.)

<i>Plan No.</i>	<i>Title</i>
5840	Artificial Breeding Stall
5846	Milking Stall
5851	Bull Barn
5868	Milking Plant
5875	Milking Plant
5885	Free Stall System—Dairy
5933	Calf Pens
5937	Fallout Shelter—Dairy
5938	Fallout Shelter—Dairy
5953	Stall Barn Fallout Shelter
5954	Free Stall Fallout Shelter
5955	Free Stall Fallout Shelter
5956	Free Stalls
5962	Tilting Calf Table
5969	Tilting Calf Table
5970	Calf Barn
5977	Dairy Equipment
5981	Manure Tank
5985	Free Stall System
5987	Manure Tank
6023	Free Stall System—Dairy
6025	Free Stall System—Dairy
6030	Free Stall Barn
6031	Free Stall System
6033	Milk House
6034	Free Stall Barn
6035	Free Stall System
6037	Crowding Gates—Dairy
6039	Free Stall Barn
6042	Free Stall Barn
6045	Self Feeder—Cattle
6050	Free Stall Barn
6052	Elevated Calf Pens
6057	Calf Tie Stalls
6063	Milk House
6066	Cattle Feeders
6067	Free Stall Shed
6078	Milkhouse
6092	Crowding Gate for Dairy Cattle
6102	Heifer Barn—Free Stall
6111	Free Stall Barn
6112	Pole Frame Dairy Barn
6113	Loose Housing Layout for Dairy Cattle
6126	Ventilation System for Cold Free Stall
6132	Milkhouse for Dairy Cattle
6138	Portable Stalls for Calves
6143	Wagon Rack for Silage Feeding
6146	Maternity Barn for Cows
6164	Dairy Calf Nursery
6165	Cow Kennels
6174	Milkhouse
6180	Movable Calf Pen
6186	Calf Barn
6194	Combination Breeding Stall and Box Stall

DAIRY (Contd.)

<i>Plan No.</i>	<i>Title</i>
6196	Dairy Barn—Economic Free Stall
6199	Elevated Calf Stall
6200	Elevated Calf Stall
HORSES	
5107	Box Stall Details
5175	Horse Stalls
5838	Riding Horse Barn
5943	Two-Horse Trailer
5994	Saddle Horse Barn
6010	Horse Barn
6011	Horse Barn
6014	Horse Equipment
6015	Horse Show Rings
6024	Horse Barn
6082	Portable Stable for a Horse
6107	Horse Barn
6118	Horse Barn, 2 Stall
6128	Horse Barn, Indoor Exercise Facilities
6148	Horse Barn—Capacity 88 Horses
6170	Horse Barn, 10 Stall
6171	Horse Barn and Arena

FEED STORAGE

6009	50' Truss
6060	Machine Shed
5528	Four Bin Granary
5529	Granary
5532	Grain Elevator
5533	Corn Crib
5648	Sweet Potato House
5860	Fruit Cooler
5869	Drying Storage Shed
5872	Self-feeding Fences
5878	Corn Crib
5879	Hay Storage
5927	Potato Storage
5934	Fallout Shelter
5935	Storage Feeding Shed
5948	Fallout Shelter—People
5951	Fallout Shelter—Storage
5957	Fallout Shelter
5966	Fertilizer Shed
5979	Potato Storage
5989	Potato Storage
6016	Tobacco Barn
6017	Tobacco Barn
6018	Potato Storage
6021	Braced Wall Silo
6038	Potato Storage
6048	Bunker Silos—A, B and C
6055	Horizontal Silo

(Continued)

FEED STORAGE (Contd.)

Plan No.	Title
6059	Grain Storage Building
6068	Grain-Feed Handling Center
6069	Grain-Feed Handling Center
6070	Shed for Drying Hay
6072	Transportable Storage Bin
6081	Grain-Feed Handling Center
6086	Four Storage Sheds
6090	Grain Bin, 5,500 Bushel
6093	Storage Building for Garden Tools
6099	Movable Shed
6100	Utility Shed
6109	Wood Bunker Silo
6110	Concrete Trench Silo
6117	Fertilizer Storage
6119	Pallet Bin
6120	Pallet Bin
6121	Pallet Bin for Vegetables
6145	Storage Building for Fruit
6150	Machinery Shed
6168	Implement Shed
6175	Horizontal Silo

GREENHOUSES

5189	Sash Greenhouse
5941	Greenhouse Cold Frame
5946	Greenhouse Plastic
5971	Hotbed
5980	Plant Growth Chamber
6029	Greenhouse
6064	Lath House
6080	Mini Hotbed and Propagating Frame
6094	Plastic-covered Greenhouse
6097	Tri-penta Greenhouse
6101	Propagation Unit for Plants
6163	Greenhouse Benches
6181	Home Greenhouse
6185	28' Greenhouse

BUILDINGS AND DETAILS

5146	Farm Shop
5166	General Barn
5625	Rafter Framing
5626	Rafter Framing
5662	Gable Roof Frame
5663	Gambrel Roof Frame
5664	Gambrel Roof Frame
5669	Typical Walls
5670	Typical Walls
5671	Typical Walls
5680	Gambrel Roof Frame
5830	Pole Barn
5831	Pole Barn
5832	Pole Barn
5841	Machinery Shed

BUILDINGS AND DETAILS (Contd.)

Plan No.	Title
5847	Hay Shed
5848	Bunker Silo
5849	Machine Shed and Shop
5855-5	Shed Roof
5865	Bunker Silo
5921	36' Truss
5922	24' Truss
5923	24' Truss
5929	Garages
5930	Garages
5949	40' Roof Truss
5973	32' Utility Truss
5978	40' Truss
6005	Truss
6007	40' Truss
6008	48' Truss

VACATION BUILDINGS

5184	Tourist Cabin for Two
5185	Tourist Cabin for Five
5186	Tourist Cabin for Four
5187	Summer Camp Building
5506	Five-Room Log Cabin
5507	Three-Room Cabin
5694	Bunk House
5928	Cabin
5964	24' A-Frame Cabin
5965	36' A-Frame Cabin
5968	Cabin
5997	Vacation House
5998	Adirondack Shelter
6002	Cabin
6003	A-Frame Cabin
6004	Cabin
6013	Dormitory Loft Cabin
7010	Two-Bedroom Cabin
7013	Two-Bedroom Log Cabin

MISCELLANEOUS STRUCTURES

5188	Outdoor Fireplace
5192	Roadside Stand
5193	Roadside Stand
5197	Farm Spring House
5198	Incinerator
5505	Farm Gates
5614	Auto Bumper Gate
5695	Smoke House
5699	Roadside Stand
5824	Play Grounds
5833	Pole Barn Details
5908	Hay Wagon
5942	Irrigation Pipe Trailer

(Continued)

MISCELLANEOUS STRUCTURES (Contd.)

<i>Plan No.</i>	<i>Title</i>	<i>Plan No.</i>	<i>Title</i>
5963	Water Supply System	6083	Campground Comfort Station
5975	Boat Landing	6098	Incinerator
5982	Display Stands	6123	Comfort Station
5983	Roadside Stand	6137	Hutches for Rabbits
5995	Picnic Shelter	6147	Tank for Treating Wood
6020	Barbeque Pit	6149	Community Building
6022	Barbeque Pit	6151	Gate, Telescoping Type
6027	Roadside Market	6155	Sedimentation Tank
6028	Slot Ventilators	6162	Cable Fencing
6041	Corral Transport	6173	Wagon Rack for Tossed Bales
6046	Sprinkler Pipe Trailer	6177	Dock Bumper
6054	Pit-Type Privy	6190	Fan Ventilation Systems
6071	Wagon Box for Drying Hay	6191	Three-Point Hitch Boom
6079	Pavilion with Kitchen	6192	Pick-up Truck Racks

**PLANS AVAILABLE FROM
THE
AMERICAN PLYWOOD ASSOCIATION
1119 A STREET
TACOMA, WASHINGTON 98401**

GENERAL INFORMATION

<i>Number</i>	<i>Description</i>
A40	Plywood Siding
A30	Plywood Sheathing for Walls and Roofs
Y110	Plywood Agricultural Construction Guide
V605	Plywood "How To" Book (how to buy and specify, work and finish information)
Y390	Guide to Plywood Grades

CATTLE — DAIRY AND BEEF

A500	Plywood Beef Cattle Feeder (4' x 7' portable unit)
P300	350-Bushel Cattle Feeder (8' x 16' portable unit)
U140	Liquid Supplement Cattle Feeder

FEED AND GRAIN STORAGE

M200	1,200-Bushel Portable Grain Bin (12' x 16' building)
W115	Overhead Bin for Feed, Grain or Fertilizer
N850	Four Compartment Bin for Farm Feed Mill (160 cu. ft./compartment)
T130	5,500-Bushel Grain Bin
X115	Plywood for Granular Storage

FERTILIZER

W115	Overhead Bin for Feed, Grain or Fertilizer
T115	Transportable Fertilizer Bin

MATERIALS HANDLING

Y205	Plywood Design Manual: Industrial and Agricultural Pallet Bins (48-page manual for design of bins for apples, pears, carrots, tomatoes, etc.)
N513	47" x 47" All Bolted Plywood Pallet Bin
R150	All Bolted Plywood Vegetable Pallet Bin
U165	47" x 40" All Bolted Plywood Pallet Bin
N511	Modified "Davis" Plywood Pallet Bin
M310	1-Ton Pallet Bin with Gravity Discharge
W110	490-Cubic Foot Bulk Hauler
	Case Histories:
R130	Plywood Pallet Bins Solve Peach Harvest Crisis
Y105	Of Note: Lemon Pallet Bin

(Continued)

PLYWOOD RIGID FRAME — BUILDING SYSTEM

Number	Description
H450	32' and 40' Rigid Frame Structure

POLE CONSTRUCTION — BUILDING SYSTEM

W120	Utility Buildings (28', 32', 36' and 40')
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POULTRY ENTERPRISE

V130	USDA-6000 Poultry House Panel Construction — Floor Management
V115	USDA-6001 Poultry House Panel Construction — Cage Management

SWINE ENTERPRISE

K430	A-Type Hog House (6' x 6' portable units)
U155	Modified A-Type Hog House
K480	Swine Finishing Shed (open front end)
U670	Farrowing Shed (two 8' x 20' portable pull-together units)
U170	24' x 48' Farrowing House
U175	Farrowing Stall
Z115	Plywood in Swine Housing

MISCELLANEOUS

X495	Here's the All-Weather Wood Foundation System
Y800	Product Standard PS 1 for Construction and Industrial Plywood
S340	High Density Overlaid Plywood
U355	Medium Density Overlaid Plywood
Q30	MDO Plywood Siding (single-page data sheet on Medium Density Overlaid Plywood)
Q220	Pressure-Preserved Plywood (product data sheet)
V307	Finishing Plywood for Exterior Exposure (single sheet)
X440	Refinishing Plywood for Exterior Exposure (single sheet)
Z338	303 ® Product Data Sheet
U160	2-Stall Horse Barn
X505	Everything You Wanted to Know About Plywood

Appendix D

PLANS AVAILABLE FROM
MICHIGAN STATE UNIVERSITY
PLAN SERVICE SECRETARY
226 AGRICULTURAL ENGINEERING BUILDING
MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48824

BUILDING DETAILS

Number	Description	Price*
703-C1-9	Gambrel Roof Truss, Braces Rafter Detail	N.C.
703-C2-38	Gothic Dairy Barn	N.C.
703-A1-56	24' Ring Bolt Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-57	24' Ring & Bolt Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-58	24' Glue Nail Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-59	24' Glue & Nail Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-60	30' Ring Bolt Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-61	30' Ring & Bolt Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-62	30' Glue Nail Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-63	30' Glue & Nail Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-64	36' Ring Bolt Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-65	36' Ring & Bolt Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-66	36' Glue Nail Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-67	36' Glue Nail Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-68	40' Ring Bolt Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-69	40' Ring Bolt Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-70	40' Glue Nail Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-71	40' Glue Nail Truss— $\frac{1}{4}$ Pitch	N.C.
703-A1-74	50' Glue Nail Truss— $\frac{1}{6}$ Pitch	N.C.
703-A1-84	24' Ring Bolt Truss— $\frac{1}{6}$ Pitch (single slope)	N.C.
703-A1-85	24' Glue Nail Truss— $\frac{1}{6}$ Pitch (single slope)	N.C.
703-A1-87	30' Glue Nail Truss— $\frac{1}{6}$ Pitch (single slope "A")	N.C.
703-A1-88	30' Glue Nail Truss— $\frac{1}{6}$ Pitch (single slope "B")	N.C.
703-A1-89	60' Glue Nail Truss— $\frac{1}{6}$ Pitch	N.C.
703-C1-91	40' Glue Nail Truss— $\frac{1}{6}$ Pitch (to support ceiling loads)	N.C.
MWPS-9	Designs for Glued Trusses (revised 1975)	\$2
MWPS-10	Designs for Split Ring Trusses	\$1

FAMILY HOUSING

MWPS-4	Home Improvement Plan Book	\$1
MWPS-12	Outdoor Living Planning & Construction Guide	\$1
MWPS-14	Private Water Systems	\$1
MWPS-16	Family Housing Handbook	\$2
Garages	(See file #741)	

(Continued)

FAMILY HOUSING (Contd.)

Number	1st Floor sq. ft.	Type	Basement	Price*
5506		Log (5 room, 2 bedrm.)	No	\$1
5507		Log (3 room, 2 bedrm.)	No	N.C.
5928	476	Cabin	No	\$1
5964	480	A-Frame Cabin	No	\$1
5965	720	A-Frame Cabin	No	\$1
5968	576	Cabin	No	\$1
5997	792	Cabin	No	\$1
6002	576	Cabin—Pole	No	N.C.
6013	22' x 24' (1st floor) 12' x 24' (loft)	Cabin	No	\$1
6004	320	Cabin	No	N.C.
7148	468	Solar Cottage	No	\$1
7146	1025	1 bedrm.	No	\$1
7206		1 bedrm.	No	\$1
7149	2049	2 bedrm.	Yes	\$1
7157	1268	2 bedrm.	Yes	\$1
7179	896 each floor	2 bedrm.	Yes	\$1
7200	Duplex	2 bedrm.	No	\$1
7198	(over garage)	2 bedrm.	No	\$1
7132	1512	3 bedrm.	No	\$1
7138	1440	3 bedrm.	No	\$1
7139	1492—Masonry	3 bedrm.	Yes	\$1
7164	1425—Pole & Panel Construction	3 bedrm.	No	\$1
7178	866—Masonry	3 bedrm.	No	\$1
7162	2100	4 bedrm.	No	\$1
7181	1028 each floor	5 bedrm.	Yes	\$1
7182	860	3 bedrm.—Tenant	No	\$1
7196	1150	3 bedrm.	No	\$1
7200		2 bedrm.—Duplex	No	\$1
7201		4 bedrm.—Split level entry	No	\$1
7202		3 bedrm.—Carport & den	No	\$1
7203		3 bedrm.—Split bath	No	\$1
7204		2 bedrm.—Carport	No	\$1

SEASONAL LABOR HOUSING

Number	Description	Price*
719-C2-1	Portable Privy	N.C.
719-C2-2	Septic Privy, Shower & Laundry Building	N.C.
719-C2-3	Flush Toilet, Shower & Laundry Building	N.C.
719-C2-6	16' x 24' Cabin	N.C.
719-C2-11	22' x 36' Duplex Cabin	N.C.

GENERAL PURPOSE BUILDINGS AND EQUIPMENT

720-C1-11	30'-, 46'- or 62'-wide Pole Building	\$1
720-C1-12	40'-, 56'- or 72'-wide Pole Building	\$1
720-C1-13	36'-, 52'- or 68'-wide Pole Building	\$1
720-C1-16	40' General Purpose Clear Span Pole Building	\$1
720-C1-17	50' General Purpose Clear Span Pole Building	\$1
720-C1-18	60' General Purpose Clear Span Pole Building	\$1
720-C1-19	Hay Barn	\$1
72008	Brace Rafter for 32' Barn Width	\$1
72044	24' Frame Utility Building	\$1
72045	30' Frame Utility Building	\$1
72046	36' Frame Utility Building	\$1
72047	40' Frame Utility Building	\$1

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GENERAL PURPOSE BUILDINGS AND EQUIPMENT (Contd.)

Number	Description	Price*
72064	24' Rigid Frame Utility Building	\$1
72065	30' Rigid Frame Utility Building	\$1
72067	40' Rigid Frame Utility Building	\$1
72074	24' Masonry Utility Building	\$1
72075	30' Masonry Utility Building	\$1
72077	40' Masonry Utility Building	\$1
72084	24' Tilt-up Concrete Utility Building	\$1
72085	30' Tilt-up Concrete Utility Building	\$1
72087	40' Tilt-up Concrete Utility Building	\$1

BEEF, DAIRY AND HORSE EQUIPMENT

MWPS-6	Beef Equipment Plan Book (revised 1975)	\$2
MWPS-7	Dairy Equipment Plan Book (revised February, 1976)	\$2
871-A1-1	Auger Feed Bunks	N.C.
871-C1-19	Silage Bunk	N.C.
871-C1-29	Mechanical Silage Bunk	N.C.
871-C1-33	Cattle Feed Bunks, Mechanized	\$1
871-A1-23	Calf Hay Rack	N.C.
871-C1-34	Pyramid Silage Feeder	N.C.
5925	Cattle Feeding Rack, Hay and Silage	N.C.
871-C1-39	Individual Calf Stall	N.C.
6138	Portable Stalls for Calves	N.C.
6152	Corral & Breeding Chute for Beef Cattle	N.C.
6049	Corral (with curved chute)	\$1
871-A1-6	Ensilage Cart	N.C.
871-A1-5	Feed Cart	N.C.
5940	Cattle Dipping Vat and Inspection Facility	\$1
871-A1-22	Extension Hurdle for Cattle	N.C.
871-A1-13	Hinged Pen Panel	N.C.
5752	Cattle Guard (concrete and steel)	N.C.
871-C1-38	Expandable Corral	\$1
5991	Beef Cattle Corral	\$1
6037	Automatic Crowding Gate	N.C.
6066	Cattle Feeders	N.C.
6092	Crowding Gate for Dairy Cattle	\$1
6077	Headgate for Cattle (walk-through type)	N.C.
6091	Auction Yard for Livestock	\$1
6103	Breeding Chute for Cattle	\$1
6133	Squeeze Chute for Cattle	\$1
MWPS-15	Horse Handbook, Housing & Equipment	\$2
5175	Horse Stall	N.C.
6082	Portable Stable for Horse	\$1
6143	Wagon Rack for Silage Feeding	N.C.
5960	Loading Ramp	N.C.
6180	Movable Calf Pen	N.C.

HORSE BARNES

722-C1-10	10' x 12' Shelter for Horses (open shed)	N.C.
722-C1-11	36' x 60' Riding Horse Barn (5 single stalls each side, box stall at end, plus feed and hay storage and harness room)	\$1
722-A1-12	Horse Stall (single)	N.C.
722-C1-13	16' x 24' Gambrel Roof (2 box or 3 tie stalls)	\$1
722-C1-14	24' x 24' Horse Barn—Post and Rafter Construction	\$1
722-C1-15	24' x 36' Horse Barn—Post and Rafter Construction (3 box stalls plus storage for feed and equipment)	\$1

(Continued)

HORSE BARNs (Contd.)

Number	Description	Price*
722-C1-16	Expandable Horse Stable (12' x 20' shed roof with 4' overhang, 2 box stalls—expandable in length)	\$1
722-C1-18	30' x 60' Horse Barn—Post and Rafter Construction (10' center alley with 7 box stalls 10' x 12' plus storage—length can be increased by 4' increments)	\$1
722-C1-19	36' x 60' Horse Barn—Post and Rafter Construction (12' center alley with 7 box stalls 12' x 12' and 3 tie stalls plus storage for feed and equipment—length can be increased in 4' increments)	\$1
5175	Horse Stalls (alternate cross sections—12' x 12' box stalls plus storage space & tie stalls)	N.C.
5640	Horse Barns—36' x 40'; 36' x 46'; 36' x 48'; 36' x 50' (floor plans only)	N.C.
5838	Riding Horse Barn (2 box stalls 12' x 6' and 9' feed room)	\$1
5943	Two-Horse Trailer (four-wheel, tandem axle)	\$1
6107	Horse Barn (3-stall, with outdoor pen)	N.C.
6014	Horse Equipment: Coop—2'9" x 10'0"; White Rail Jump; Wing, Gate, Brush Jump and Natural Rail (Hunter's) Jump	\$1
6015	Horse Show Rings	N.C.
6082	Portable Stable for a Horse	\$1
MWPS-15	Horse Handbook (see file #871)	\$2

DAIRY CATTLE HOUSING AND MILKING PARLORS

723-C1-66	60-Cow Loose Housing Layout	\$1
723-C1-68	100-Cow Loose Housing Layout	\$1
723-C1-69	30-Cow Loose Housing Layout	\$1
723-C1-70	Herringbone Milking Plant	\$1
723-C1-71	Herringbone Milking Plant	\$1
723-C1-72	Stanchion Dairy Barn (2-story)	\$1
723-C1-75	100-Milking Cow Loose Housing Construction Details	\$1
723-C1-76	Calf and Youngstock Housing	\$1
723-C1-77	Single-Story Stanchion Barn	\$1
723-C1-78	Free Stall Barn (side opening)	\$1
723-C1-79	Calf and Maternity Barn (as shown on <i>Calf & Youngstock Bulletin</i>)	\$1
6111	Free Stall Barn (drive-through type) Pennsylvania	\$1
723-C1-80	Free Stall Barn (end opening)	\$1
723-C1-81	40-Cow Milking Facility, Total Herd (open lot)	\$1
723-C1-82	88-Cow Milking Facility, Total Herd (open lot)	\$1
723-C1-95	Heifer Barn—Wagon Feed & Cross Alley	\$1
723-C1-96	Heifer and Dry Cow Barn—Wagon	\$1
723-C1-97	Free Stall Heifer Barn—Mechanized Feeder	\$1
723-C1-83	88-Cow Milking Facility (cold-covered)	\$1
723-C1-84	Dry Cows & Youngstock Barn for 88 Cow Herd (cold-covered)	\$1
723-C1-85	Milking Room, Maternity & Calf Building	\$1
723-C1-86	152-Cow Milking Facility (cold-covered)	\$1
723-C1-87	88-Cow Milking Facility (warm-enclosed)	\$1
723-C1-88	Calf Barn—24' x 36' Pole Construction	N.C.
723-C1-92	Comfort Stall	N.C.
723-C1-93	Standard Cross Section for Stall Barn	N.C.
723-C1-94	Tie Stall	N.C.
72325-B	1-Story Gable Roof	\$1
75246	Herringbone Milking Plant	\$1
6035	Free Stall System (4-row)	\$1
723-C1-89	200-400 Cow Free Stall Barn Facility	\$1
6102	Heifer Barn (free stall)	\$1
723-C1-98	68-Cow Milking Facility Fenceline (with open side)	\$1

(Continued)

DAIRY CATTLE HOUSING AND MILKING PARLORS (Contd.)

Number	Description	Price*
23-C1-99	200-Cow Free Stall Barn Facility (with gutter)	\$1
2342	Warm Calf Barn	\$1
2355	86' Dairy Barn (206 free stalls)	\$1
2356	76' Dairy Barn (100 free stalls)	\$1
2357	Warm Dairy Barn (80 free stalls)	\$1
52-C1-30	Farm Milkhouse w/Utility Room	N.C.
52-C1-38	Db. Herringbone Milk Parlor, Db. Return—No Treatment	\$1
52-C1-39	Db. Herringbone Milk Parlor, Sg. Return—No Treatment	\$1
52-C1-40	Db. Herringbone Milk Parlor, Sg. Return—Treatment	\$1
174	Milkhouse (12' x 22')	\$1

BEEF CATTLE HOUSING

24-C1-10	200 to 800 Beef Feeding Layout, Mechanized Bunk System	\$1
24-C1-11	Expansible Fenceline Cattle Feeding Layout	\$1
24-C1-13	Covered Beef Feedlot with Fenceline-type Feed Bunk	\$1
24-C1-14	Covered Beef Feedlot with Mechanical Bunk	\$1
24-C1-15	Beef Housing—Slotted Floor	\$1
2432	Pole Barn (recommended as framing guide for remodeling existing barns of this type)	\$1
2440	48' Confined Beef (slotted, open front, inside bunk)	\$1
2441	34' Confined Beef (slotted, open front, fenceline bunk)	\$1
2442	34' Confined Beef—Shed Roof (slotted, open front, fenceline bunk)	\$1

SHEEP HOUSING

25-C1-8	Portable Sheep and Hog Shelter (sunshade)	N.C.
5919	Sheep & Lambing Shed	\$1
6019	Corrals for Sheep	\$1
6096	Shearing Shed & Corral	N.C.

SHEEP EQUIPMENT

WPS-3	Sheep Equipment Plan Book	\$2
372-C1-5	Sheep Handling Layout	\$1
372-C1-9	Lambing Pen	N.C.
372-C1-21	Covered Salt Box	N.C.
5859	3-Way Cutting Gate (Sheep)	N.C.
372-C2-4	4-Wheeled Sheep Dipping Tank	N.C.
372-A1-6	Lamb Creep	N.C.
372-C1-30	Sheep Feeder	N.C.

SWINE HOUSING

726-C1-20	10' x 12' Shed Roof Hog House	N.C.
726-C1-22	2-Unit Farrowing House	N.C.
726-C1-24	12-Sow Farrowing House—Comb. Stall & Pen	\$1
726-C1-25	12-Sow Farrowing Housing (with farrowing stalls)	\$1
726-C1-28	Farrowing Stall (with adjustable sides)	N.C.
726-C1-31	1,000 Head-Farrowing House—4/yr.	\$1
726-C1-34	33-Sow Farrowing House (with slotted floor)	\$1
72647	2-Pen Farrowing House	N.C.
726-C1-26	Finishing House (12 sows, 4 farrowings/yr.)	\$1
726-C1-30	Finishing House (partial slotted floor)	\$1
726-C1-33	Finishing House (open front)	\$1
726-C1-35	Finishing House (slotted floor nursery)	\$1
5993	Shed-type Farrowing Unit or Farrow-to-Finish	\$1
6125	Farrowing House for Sows	\$1
6130	Farrowing House for Swine (environ. control)	\$1

(Continued)

SWINE EQUIPMENT

Number	Description	Price*
MWPS-8	Swine Equipment Plan Book	\$2
873-C1-23	Farrowing Stall	N.C.
873-A1-25	Sow Feeder	N.C.
5828	Farrowing Stall	N.C.
5947	Portable Shade for Hogs	N.C.

POULTRY HOUSING

727-C1-87	36' x 108' Poultry House (3,000 layers)	\$1
72754	40' Cage Laying House	\$1
727-C1-97	10,000 Bird Cage House	\$1

SMALL ANIMAL HOUSING

6137	Hutches for Rabbits	\$1
6164	Dairy Calf Nursery	\$1

MANURE PITS

743-C1-4	Concrete Manure Loading Ramp	N.C.
74303	Waste Storage Tank Liquid (rectangular, below ground)	\$1

UTILITY MISCELLANEOUS BUILDING

6072	Transportable Storage Bin for Fertilizer	\$1
6136	Storage Shed for Pesticides	N.C.
6176	Bulk Storage Shed	N.C.
74401	Portable Fertilizer Storage (24 ton)	\$1

HAY AND FEED STORAGE

73105	30' Hay Shed	\$1
73106	36' Hay Shed	\$1
73107	40' Hay Shed	\$1
73108	48' Hay Shed	\$1
6167	Silage Feed Bunks	N.C.

} Pole Rafters—Not Truss

GRAIN AND SEED STORAGE

732-C1-10	Grain Bin Construction Details	N.C.
73217	Small Feed Bins (20 bu.)	\$1
73268	10,000-Bushel Grain Elevator	\$1
73269	10,000-Bushel Grain Elevator	\$1
73292	Grain Feed Handling Center	\$1
73293	Grain Feed Handling Center	\$1
73294	Grain Feed Handling Center, Work Tower Beside Drive Offset Gable	\$1
732-C1-17	Double Corn Crib	N.C.
73220	41'-wide Pole Grain Storage	\$1
73236	28'-wide Ear Corn Crib	\$1
73271	Single-Pole and Snowfence Crib	N.C.
73272	Single-Frame Corn Crib	N.C.
73280	Double-Pole Corn Crib	N.C.
MWPS-13	Planning Grain Feed Handling for Livestock and Cash Grain Farms	\$2
6059	Grain Storage Building (tilt-up concrete construction)	\$1

SILOS

733-C1-13	Bunker Silo (tilt-up concrete construction, against bank)	N.C.
733-C1-14	Bunker Silo (wood)	N.C.
733-C1-15	Bunker Silo (small, tilt-up concrete construction, against bank)	N.C.

(Continued)

SILOS (Contd.)

Number	Description	Price*
843	Bunker Silo—Type C	N.C.
858	Bunker Silo—Type D (with roof)	\$1
055	Horizontal Silo (tilt-up construction, above ground)	\$1

FRUIT AND VEGETABLE STORAGE

5948	Storage & Fallout Shelter	\$1
734-C1-33	Fruit Storage	\$1
5927	Potato Warehouse (60,000 CWT)	\$1
5979	Potato Storage (60,000 CWT door/bin)	\$1
6018	Potato Storage (60,000 CWT - cross alley)	\$1

MACHINERY STORAGE, SHOPS AND GARAGES

741-C1-1	Garage (14' x 24')	N.C.
741-C1-12	Gable Roof Garage (24' x 24')	N.C.
741-C1-13	Hip Roof Garage (24' x 24')	N.C.
741-C1-36	2-Car Garage (24' x 24')	\$1
74101	1-Car Garage (12' x 24')	N.C.
74102	2-Car Garage (22' x 22')	N.C.
6060	Machine Shed (tilt-up concrete construction)	\$1
6093	Storage Building for Garden Tools (little red barn)	N.C.
741-C1-7	Gothic Roof Implement Shed	N.C.
741-C1-26	Implement Shed (36' x 80')	N.C.
741-C1-30	24' Clear Span Machine Shed	\$1
741-C1-31	30' Clear Span Machine Shed	\$1
74142	Machinery Shed (30' side opening)	\$1
74143	Machinery Shed (40' end opening)	\$1
74118	Machine Housing Repair	N.C.
74119	Shop (30' x 30')	\$1
6086	Storage Sheds (12' x 16'; 16' x 12'; 8' x 10')	\$1
6099	Movable Shed (12' x 12')	N.C.
6100	Utility Shed (8' x 8'; 8' x 16')	\$1
6090	Grain Bin (5,500 bushel)	\$1
74146	48' Pole Machine Shed	\$1

RECREATIONAL BUILDINGS, EQUIPMENT AND LAYOUTS

RECREATION AND CAMP STRUCTURES

6083	Campground Comfort Station	\$1
6020	Sheltered Bar-B-Q Pit (13' x 19')	N.C.
6022	Insect-Proof Bar-B-Q Pit	N.C.
5995	HP Picnic Shelter (40' each side)	\$1
5975	Boat Landing	\$1
5998	Adirondack Type Shelter (13' x 15')	\$1
	Cabins and Vacation Houses (see file #712)	

PARK AND CAMP EQUIPMENT

764-A1-6	Outdoor Picnic Table	N.C.
5188	Outdoor Fireplace & Table	N.C.
852-C1-8	Outdoor Incinerator	N.C.

LAYOUTS AND LANDSCAPING

5824	Playground Layouts	N.C.
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(Continued)

ROADSIDE MARKETS

Number	Description	Price*
767-C1-1	Roadside Market (movable)	N.C.
767-C1-2	Roadside Market (enclosed)	\$1
5193	Roadside Stand (enclosed)	N.C.
5699	Roadside Stand (movable)	N.C.
6027	Roadside Market	\$1

GREENHOUSES

6080	Mini-Hotbed and Propagating Frame	N.C.
771-C1-6	Plastic Greenhouse (18' x 48' or desired length)	\$1
771-C1-7	Plastic Greenhouse (18' x 48' or desired length w/roof panels)	\$1
6094	Plastic Covered Greenhouse	\$1
5946	Portable Plastic Greenhouse	N.C.
6029	Greenhouse Framing (22', 10 $\frac{5}{8}$ ' span)	\$1
6163	Greenhouse Benches	N.C.

MISCELLANEOUS RESIDENTIAL AREAS AND FACILITIES

780-C1-1	Tornado Cellar	N.C.
5948	Storage & Fallout Shelter (see File #734)	
6209	Storm Celler	N.C.

FENCES

6151	Gate—Telescoping Type	N.C.
6162	Cable Fencing	N.C.

MISCELLANEOUS

74001	Insulated Pump House	N.C.
5505	Farm Gates	N.C.
852-A1-5	Concrete Incinerator	N.C.
MWPS-14	Private Water Systems	\$1
6064	Lath House for Nursery Plants	\$1
6098	Incinerator for Garbage & Trash	N.C.
MWPS-2	Farmstead Planning Handbook	\$2
MWPS-18	Livestock Waste Facilities Handbook	\$2
MWPS-19	Livestock Waste Management w/Pollution Control	\$2

*Make checks payable to Michigan State University.

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